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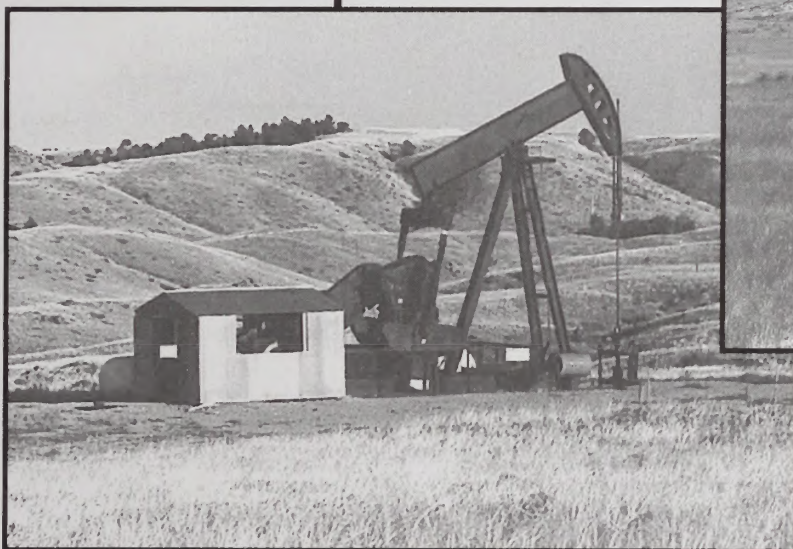
Newcastle Resource Area

March 1998



DRAFT

Environmental Impact Statement for the Newcastle Resource Management Plan (Second Draft)



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Comments, including names and street addresses of respondents, will be available for public review at the above address during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays, and may be published as part of the EIS. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by the law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield; a combination of uses that take into account the long term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness and natural, scenic, scientific and cultural values.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Wyoming State Office

P.O. Box 1828

Cheyenne, Wyoming 82003-1828

February 25, 1998

Dear Reader:

Attached is the second draft Environmental Impact Statement (EIS) for the Resource Management Plan (RMP) covering the public lands in the Wyoming portion of the Newcastle Resource Area. The first draft EIS for the Newcastle RMP was issued in September 1993. So that all interested persons will have equal opportunity to review and comment, it was decided to update the document and reissue a second draft EIS. This document outlines four alternatives for managing the public lands and resources in the Newcastle Resource Area. The public lands include not only the Federal land surface administered by the Bureau of Land Management (BLM), but also the Federal mineral estate administered by the BLM. The four alternative RMPs presented in Chapter 2 focus on allocating public lands and resources among their uses and prescribing general management actions that would be taken. The alternatives are designed to resolve resource management issues that were identified with public involvement during the planning process. This document also describes the anticipated environmental consequences of implementing each alternative.

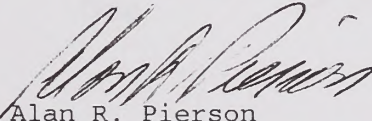
Your comments are invited on the alternatives and the descriptions of environmental consequences. A 90-day comment period will begin the day following the date that a Notice of Availability of the draft EIS is published in the Federal Register by the Environmental Protection Agency.

Please send your written comments to Gary Johnson, Area Manager, Newcastle Resource Area, 1101 Washington Boulevard, Newcastle, Wyoming 82701. Your comments will be fully considered and evaluated in preparing the final EIS for the Newcastle RMP. We expect to have the final EIS available for your review by late summer 1998.

We will be holding either public meetings, open houses, or both during the 90-day comment period. The dates, times, and locations of meetings, open houses or other public involvement activities will be announced in future Federal Register or other public notices, news releases or mailings.

With your participation, we hope to move forward toward improved public land management in the Newcastle Resource Area.

Sincerely,


Alan R. Pierson
State Director

Attachment

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

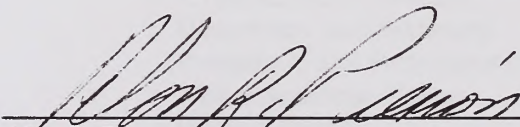
for the

NEWCASTLE RESOURCE MANAGEMENT PLAN
(SECOND DRAFT)

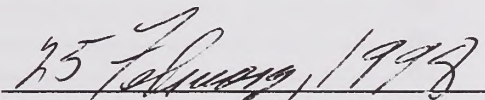
Prepared by:

**United States Department of the Interior
Bureau of Land Management
Newcastle Resource Area
Casper District
Casper, Wyoming**

March 1998



Alan R. Pierson
State Director



Date

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ABBREVIATIONS

AAP	– Average annual precipitation
AMP	– Allotment management plan
APD	– Application for permit to drill
AUM	– Animal unit month
ACEC	– Area of critical environmental concern
ARPA	– Archeological Resources Protection Act of 1979
APHIS/WS	– Animal and Plant Health Inspection Service, Wildlife Services, U.S. Department of Agriculture
B.P.	– Before present
BLM	– Bureau of Land Management, U.S. Department of the Interior
BOR	– Bureau of Reclamation, U.S. Department of the Interior
CA	– Communitization agreement
CEQ	– Council on Environmental Quality
CFR	– Code of Federal Regulations. Numbers refer to title and part; that is 40 CFR 1500 refers to title 40, part 1500.
C&MU	– Classification and Multiple Use Act of 1964
DEQ	– State of Wyoming, Department of Environmental Quality
EA	– Environmental assessment
EIS	– Environmental impact statement
EPA	– U.S. Environmental Protection Agency
ERMA	– Extensive recreation management area
ESA	– Endangered Species Act of 1973
FS	– Forest Service, U.S. Department of Agriculture
FUP	– Free use permit
FWS	– Fish and Wildlife Service, U.S. Department of the Interior
FACA	– Federal Advisory Committee Act of 1972
FLPMA	– Federal Land Policy and Management Act of 1976
gpm	– Gallons per minute
HMP	– Habitat management plan
I&E	– Inspection and enforcement
kg/ha/yr	– Kilograms per hectare per year
MFP	– Management framework plan
mg/l	– Milligrams per liter
MRB	– Missouri River Basin
MSA	– Management situation analysis
MAST	– Mean annual soil temperature
mmbf	– Million board feet

ABBREVIATIONS

MSST	– Mean summer soil temperature
NNL	– National natural landmark
NOI	– Notice of intent
NPS	– National Park Service, U.S. Department of the Interior
NRA	– Newcastle Resource Area
NEPA	– National Environmental Policy Act of 1969
NRCS	– Natural Resources Conservation Service, U.S. Department of Agriculture (formerly the Soil Conservation Service – SCS)
NRHP	– National Register of Historic Places
NSPS	– New source performance standards
NAAQS	– National ambient air quality standards
ORV	– Off-road vehicle
ppm	– Parts per million
PSD	– Prevention of significant deterioration
PILT	– Payment in lieu of taxes
RMA	– Recreation management area
RMP	– Resource management plan
ROS	– Recreational opportunity spectrum
R&PP	– Recreation and public purpose
S&Gs	– Standards and guidelines
SCS	– Soil Conservation Service, U.S. Department of Agriculture (changed to Natural Resources Conservation Service – NRCS)
SRMA	– Special recreation management area
TDS	– Total dissolved solids
T&E	– Threatened and endangered species
TPI	– Total personal income
TSP	– Total suspended particulates
URA	– Unit resource analysis
USBC	– U.S. Bureau of the Census
USDA	– U.S. Department of Agriculture
USDI	– U.S. Department of the Interior
USGS	– U.S. Geologic Survey
USLE	– Universal Soil Loss Equation
VRM	– Visual resource management
WDC	– Wyoming, Department of Commerce
WDE	– Wyoming, Department of Employment (formerly Employment Security Commission)

ABBREVIATIONS

WDAI	– Wyoming, Department of Administration and Information
WDEdu.	– Wyoming, Department of Education
WDRT	– Wyoming, Department of Revenue and Taxation
WESC	– Wyoming, Employment Security Commission
WGFD	– Wyoming Game and Fish Department
WAAQS	– Wyoming ambient air quality standards
WDAFC	– Wyoming, Department of Administration and Fiscal Control
WDHSS	– Wyoming, Department of Health and Social Services
WOGCC	– Wyoming, Oil and Gas Conservation Commission
WOSIM	– Wyoming, Office of the State Inspector of Mines

CHAPTER 1

PURPOSE OF AND NEED FOR THE ACTION

BACKGROUND

The first draft environmental impact statement (EIS) for the Newcastle resource management plan (RMP) was issued in September 1993 (USDI, BLM 1993). Because some governmental groups were inappropriately allowed to provide comments on the draft after the comment period ended, it was decided to update the document and reissue a second draft EIS so that all interested persons have equal opportunity to review and comment.

The public comment letters on the first draft EIS and the Bureau of Land Management's (BLM) responses to them will be retained as part of the planning record. They are on file at the Newcastle Resource Area (NRA) office where they are available for public review. The final EIS for the RMP, when printed, will contain the proposed Newcastle RMP, comment letters on the second draft, and our responses to them.

CONCERNS AND RESPONSES

Based on the public comments received during the review of the first draft, a number of concerns were identified. The following paragraphs address these concerns and BLM's response to them.

Concern

The proposal to designate the Lance Creek fossil area as an area of critical environmental concern (ACEC).

Response

An ACEC designation for the Lance Creek area was proposed early in the planning effort for the Newcastle RMP. The first draft EIS was not clear in presenting the fact that the proposed ACEC designation applies only to the BLM-administered public land surface within the Lance Creek fossil area. It would not apply to any other lands in the area that are owned and administered by private parties or by local or state governments.

Map 3-1 in the first draft EIS did not differentiate between BLM-administered public land surface and any other land surface ownership; thus, it appeared that the ACEC designation would be applied to all lands in the identified area regardless of ownership. That map (3-1) and the paleontological resource management provisions in the preferred alternative of the first draft EIS also led to the belief that the proposed ACEC was the only place in the Newcastle Resource Area containing fossils

or significant fossils where conditional or mitigation requirements for paleontological resources need to be applied.

This is not the case. While some fossils from the Lance Creek area are significant, they are no more significant or unique than others found elsewhere in the resource area. Therefore, it would be impractical to place an ACEC designation on a few BLM-administered public land parcels in either the Lance Creek area or elsewhere in the resource area.

After evaluating the foregoing information it was decided to reject the proposed ACEC designation. Instead of the designation, BLM will simply continue to carry out existing policy for managing significant fossils wherever they occur on BLM-administered public lands. This policy includes requirements for reviewing scientific literature, surveying some areas for fossils if surface disturbance is expected, and making provisions for mitigating or preventing fossil damage. This policy applies to any action on BLM-administered public land surface. It also applies to any BLM authorizations that may be issued for actions related to mineral sales and leases or to federally owned locatable mineral activities. This policy will continue to apply in split-estate areas where the BLM administers the federal mineral estate under land surface that is owned and administered by private parties or by local and state governments. In these split-estate areas, the policy would be applicable to the BLM-authorized federal actions or authorizations (related to exploring and developing the federal minerals) to mitigate, avoid, or prevent damage to the fossils which are owned by the land surface owner. Thoughtful application of existing management techniques can be expected to provide consistent, overall treatment of fossil resources.

Concern

The preferred alternative in the first draft EIS proposed that interpretive signs and displays about fossils be placed on BLM-administered public lands in the Lance Creek fossil area.

Response

Many public comments contended that signs could invite damage to, or theft of, fossils, unwanted and uncontrolled entry onto private lands, damage to private property, and inconvenience for landowners. For these reasons, signs will not be included in the provisions for fossil resource management on BLM-administered public lands in the Lance Creek fossil area.

PURPOSE OF AND NEED FOR THE ACTION

Concern

BLM's responsibilities and authorities on split-estate lands, particularly those involving nonfederal land surface over federally owned minerals.

Response

Many of the public comments on the draft EIS indicate a misunderstanding about the BLM's responsibilities and authorities related to split-estate lands. The following brief discussion should help in clarifying BLM's responsibilities and authorities.

There are two general categories of split-estate lands. One category is those lands where the land surface is federally-owned and administered by the BLM, while some or all of the minerals under them are owned and administered by either private parties or by local or state governments. The other category is those lands where the land surface is owned and administered by private parties or by local or state governments, and some or all of the minerals under them are federally owned and administered by the BLM. Some or all of the minerals means there may also be more than one owner among the different types of mineral estates. For example, in some lands the federal government may own only the oil and gas or only the coal, or both, while the other mineral resources in those same lands (locatable, saleable, and other leasable minerals) are owned by the state or by private parties.

In either category, the mineral owners are entitled access to their minerals to explore for and develop them and to prudently use an area of the land surface and surface resources that are directly necessary to those exploration and development activities. Developers of federal minerals are required to compensate for damage to surface owner improvements, to avoid or mitigate other affects of their activities, and to reclaim the surface. Appendix A contains more detail on split-estate lands.

On split-estate lands involving BLM-administered public land surface overlying nonfederally owned minerals, the BLM has jurisdiction and statutory authority to make land use planning and resource management decisions for the public land surface only. These decisions may have some effect on the ability to manage and develop the nonfederally owned minerals but cannot preclude their development. By comparison, BLM has the following responsibilities and authorities on split-estate lands involving nonfederal surface over federally owned minerals.

1. BLM does not have any jurisdiction or statutory authority to make land use planning or resource

management decisions for the use of any land surface that is owned by private parties or by local or state governments.

2. BLM does have the authority and the responsibility to plan for and manage the federal mineral estate under split-estate lands. Planning and management of the federal mineral estate includes:

making planning and management decisions that salable and leasable federal minerals will or will not be sold or leased, and implementing those decisions;

deciding whether or not mining claims may be filed for locatable federal minerals and implementing those decisions; and,

deciding any required conditional provisions, mitigation measures, and land surface reclamation requirements that would be included in any federal minerals sales or leases (to include use authorizations) that the BLM may issue, related to exploration and development of the federal minerals in these lands, and implementing those decisions.

Such conditions, mitigation measures, and reclamation requirements are NOT requirements that the BLM places on the land surface or the surface owners. Rather, these are requirements attached to any use authorizations the BLM would issue that are related to the exploration and development of the federal minerals. These requirements are a result of both federal and state laws enacted in the interest of protecting the general environment, regardless of who owns the land surface. They also protect rights and properties of the surface owners from unnecessary and undue degradation and damage that may be caused by any activities related to "federal actions" that the BLM would take or authorize, such as selling, leasing, exploring for and developing the federal minerals. The BLM prefers to work with both the developers of the federal minerals and the surface landowners in reaching mutually acceptable surface disturbance conditions, mitigation, and reclamation requirements.

Concern

The interpretation that livestock grazing is a surface disturbance.

Response

The following should help clarify various interpretations of the narrative under Issue B on page 6 of the first draft EIS relating to surface-disturbing activities. BLM is responsible for administering surface-disturbing activi-

PURPOSE OF AND NEED FOR THE ACTION

ties only on BLM-administered public land surface and for administering exploration and development activities related to federally owned minerals where they result in surface disturbance on split-estate lands. We define surface-disturbing activities as those that result in the physical disturbance and movement or removal of the land surface, soil, and vegetation associated with such things as excavation and development activities with heavy equipment (for example, blasting, strip and pit mining, and roads). The use of vegetation by livestock and other grazing animals is not a surface-disturbing activity.

Concern

That the proposal to establish the Stateline special recreation management area (SRMA), while still allowing other uses of the area, will work against all interests and uses in the area.

Response

This proposal was in recognition of the recreational opportunities the proposed recreation management area (RMA) affords, and the increasing demand for outdoor recreation areas and activities on BLM-administered public land in the resource area. While other uses would not be precluded in the SRMA, it would be required that all uses or activities (including recreational uses and activities) that do take place are conducted or designed so that they do not detract from the recreational uses or values of the area.

Concern

Whether or not access to BLM-administered public lands in the resource area is lacking and whether or not increased access to public land will adversely affect private lands and private landowners.

Response

The first draft EIS identified the need for more access to BLM-administered public lands but does not propose obtaining access to each parcel of public land in the resource area. Only necessary access for managing the public lands is intended. This may be provided through land exchanges, easements, or other means. Condemnation of private lands for access routes is not an option and is not proposed or promoted.

Concern

Whether or not the BLM-administered public lands in the resource area need more identifying signs.

Response

BLM-administered public land boundaries may be marked when problems occur where access routes cross property lines. This will continue to be done on a case-by-case basis as problems are identified and as funding allows.

Concern

Public land sales and exchanges are too time-consuming and costly.

Response

This was a concern identified during scoping at the start of this planning effort. Approximately 297,000 acres of BLM-administered public land in the Newcastle Resource Area are found in small, scattered parcels. Many opportunities exist to improve our management capability by selling or exchanging public land parcels that are difficult or impossible to manage. Exchanges are the preferred method and are used to block-up public lands into larger units that would be more manageable. More detailed information on the land transfer process can be found in appendix B.

Comments were received identifying the length of time required to complete a public land sale or exchange. Unfortunately, there are legal and procedural requirements which take time to complete, making it difficult to speed up the process.

Briefly, the following steps must be taken to complete a land exchange or sale:

1. Determine if the proposal is in conformance with land use planning, review land status to determine if the lands are subject to application, and determine if the application meets all requirements of the law and regulations.
2. Secure views of other agencies that may have an interest in the lands, including state and local planning and zoning departments.
3. Check for unpatented mining claims, and if necessary, complete a validity exam on them.
4. Complete an appraisal of the subject lands.
5. Conduct a field examination and other investigations to gather information and data on the environmental considerations and proper classification of the lands.
6. Complete an environmental assessment and publish a notice to solicit views and comments from the public concerning the proposal. Also, assure that the action is in conformance with applicable laws.

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Based on the above review and evaluation, BLM officials may approve or disapprove the action.

Concern

Whether or not federal oil and gas leasing should be more restrictive.

Response

The BLM does not close areas of federally owned oil and gas (whether or not on split estate lands) to leasing or development unless evidence indicates that development would be incompatible with other valuable resources or land uses and the conflict cannot be mitigated. Federal oil and gas leases include necessary stipulations. Exploration and development activities are also conditioned with mitigation measures and other necessary requirements to protect soil, water, air, special management areas, sensitive resources, steep slopes, critical wildlife habitat, riparian areas, and other important land and resource values. None of the alternatives in the first draft EIS propose that stipulations or mitigation requirements on federal oil and gas leasing and development activities be lessened. Two alternatives in the first draft EIS, including the preferred alternative, propose more of these requirements or more stringent requirements than the other alternatives. Unless there is information to indicate that these requirements are not adequate there appears to be no reason to require even more stringent measures or to prohibit oil and gas leasing and development. Surface disturbance related to oil and gas exploration and development in the resource area is declining. This is because more wells are being plugged and abandoned and the locations reclaimed than there are new wells being drilled.

Concern

Whether or not policy changes in the wild and scenic rivers review process will change the outcome of the review.

Response

When the wild and scenic rivers review was conducted for the first draft EIS, the BLM's Wild and Scenic Rivers Manual included an additional eligibility criterion—"Jurisdictional Considerations." This criterion provided that, where the BLM-administered public land surface represents less than 40% of the shoreline in a waterway or waterway segment being reviewed, public land surface involved will be considered to be ineligible for further consideration. As a result, all 19 parcels of BLM-administered public lands that contained outstandingly remarkable values were ineligible for further consideration in the process. The jurisdictional eligibility

criterion was rescinded in December 1993, because jurisdictional considerations are factors of suitability rather than eligibility criteria and should be addressed in the suitability determination phase of the review process. The same 19 parcels of BLM-administered public lands located along 8 waterways in the resource area were found to meet the eligibility criteria. However, during the suitability review, it was determined that none of the BLM-administered public lands involved met the suitability factors and will not be considered for inclusion in the wild and scenic rivers system. Thus, the policy change did not result in any change in the final outcome of the wild and scenic rivers review. Appendix C describes the review process and the specific eligibility criteria and suitability factors used to make the eligibility and suitability determinations. That appendix includes a summary of the results of the review and also has been updated to show all legal descriptions of the waterway segments reviewed.

Some of the comments received questioned why some of the waterway review segments were referred to as stream rather than by name. This is because many lower order waterways are not named on US Geological Survey (USGS) topographic maps, which were used for the review. Locations of all the waterway review segments are on file in the Newcastle Resource Area office.

Concern

Threatened and endangered (T&E) or sensitive species.

Response

Three (3) plant species that occur on BLM-administered public lands in the Newcastle Resource Area have been included on a list of plants that are of special concern (table 3-20). Two (2) of these plants have been proposed for designation as "sensitive" species; one is designated as a federally threatened species. The third species has been designated as a "watch" species. These three species have been proposed for this designation based on research information, compiled through BLM inventory contracts, to obtain information on the occurrence of T&E or "candidate" plant and animal species and species of special concern in the resource area.

Candidate species are those plants or animals that are federally designated (U.S. Fish and Wildlife Service-FWS) for which the FWS has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. Proposed rules have not yet been issued because this action is currently precluded by other listing activity. Development and publication of proposed rules for these plants and animals are anticipated under the

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Endangered Species Act. Sensitive species are defined as those plants and animals that could easily become endangered or extinct in a state. Upon designation by the BLM State Director, sensitive species are given similar management attention as is given to candidate species.

Management on BLM-administered public lands must be consistent with the principles of multiple use. Therefore, where these sensitive species occur on public land, BLM will strive to use conservation practices to keep them and their habitats from decreasing and to keep them from being designated as candidate or T&E species. Where these same species occur on split-estate lands (private surface/federal mineral), conditions of the exploration and development of the federally owned minerals and related activities that the BLM would authorize would be handled in the same manner, to the extent possible.

The goal of this approach is to try to sufficiently protect these sensitive species so that it will be unnecessary for them to be listed as either candidate species or as T&E species. When plant or animal species are listed as T&E, they become more universally protected, by law, on most lands (animals on all lands and plants on federally managed lands). It is believed that it would be of mutual benefit to all parties within the Newcastle Resource Area if listing, due to insufficient protective measures, could be avoided.

The changes from the first draft Newcastle RMP (USDI, BLM 1993) in relation to the T&E or sensitive species portions of this second draft Newcastle EIS are a result of additional scientific knowledge and changes by the FWS and Wyoming Game and Fish Department (WGFD) species status listings.

The large drop in plant species (from 66 to 3 species) is a result of additional inventory work showing the more widespread nature of these special concern species and the dropping of the candidate 1-2-3 designation by the FWS. The old FWS candidate 1-2-3 system accounted for 61 plant species statewide, while the new system of candidates only accounts for three species statewide, none of which are in the Newcastle RA. One of the previous 11 proposed "sensitive" plant species (*Lesquerella arenosa* var. *argillosa* - sidesaddle bladderpod) is still considered rare enough to be eligible for this designation by the Wyoming BLM State Director. The other sensitive species—the federally threatened Ute ladies' tresses orchid (*Spiranthes diluvialis*) was found after the first draft EIS was completed. One of the previous 32 "watch" species (*Parthenium alpinum* - alpine feverfew) is still being considered as a "watch" species. The other 10 "sensitive" plant species have been found to be more abundant through inventory and

other research information or are not found on lands managed by the BLM.

The change in the candidate species definition is due to the FWS's change in definition taken from the February 28, 1996 *Federal Register* Proposed Rule, Endangered and Threatened Species, Plant and Animal Taxa (50 CFR Part 17; p. 7598).

The swift fox and mountain plover were designated as candidate species by the FWS in the September 19, 1997 *Federal Register* Proposed Rule (p. 49402). The Barr's milkvetch and feverfew plant were both found to be more common than originally thought.

Table 3-27 was updated from the first draft EIS due to newer *Federal Register* notices and proposed rules by the FWS. The earlier table had species listed under the old candidate 1-2-3 listing. The WGFD produced the nongame bird and mammal plan in October of 1996 and listed the avian and mammalian species they consider of special concern. These lists were not available in the earlier document and were added to the table. Burrowing owls, a species noted in the earlier plan, are no longer considered species of special concern within Wyoming. Appendix L shows the population and habitat variables from the WGFD nongame bird and mammal plan. The information was not in print at the time of the first EIS.

Table 3-28 in the first draft EIS showed "sensitive" plants in the Newcastle Resource Area. Due to additional inventory and research information, the plants originally listed on that table were found to be more common than previously thought or not found in habitat occurring on BLM-administered public lands and have been dropped from "sensitive" recommendation by The Nature Conservancy. The plants on the "watch" list are of similar nature with the exception of the alpine feverfew which is on the current draft BLM "watch" list; the others have been dropped. Many of the plants on the earlier list are still being tracked by The Nature Conservancy with new locations tallied and losses of populations also noted so that changes in their status can be recommended.

INTRODUCTION

To distinguish between the first Draft EIS for the Newcastle RMP and the second Draft EIS for the Newcastle RMP, this second draft document is titled *Draft EIS for the Newcastle RMP (second draft, issued 1998)*. Hereafter this second Draft EIS will be referred to as the draft EIS for the Newcastle RMP.

This draft EIS for the Newcastle RMP evaluates alternative land use plans for the management of public lands and resources administered by the BLM in the

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Wyoming portion of the Newcastle Resource Area. Each alternative analyzed in detail represents a complete and reasonable RMP which could be used to guide the management of about 291,000 acres of public land surface and about 1.4 million acres of subsurface federal mineral estate in the planning area. Each alternative also considers the land use plans of local and state governments and other federal agencies in and around the Newcastle Resource Area to assure that the approved RMP will be compatible with them.

The BLM planning process for the development, approval, maintenance, and amendment or revision of RMPs was initiated under the authority of Section 202(f) of the Federal Land Policy and Management Act of 1976 (FLPMA) and Section 202(c) of the National Environmental Policy Act of 1969 (NEPA). The process is guided by BLM planning regulations in Title 43 of the Code of Federal Regulations (CFR), part 1600 (43 CFR 1600) and the Council on Environmental Quality (CEQ) regulations in 40 CFR 1500.

The first tier of the three-tiered BLM planning process consists of (1) compiling and reviewing the current laws, regulations, policies, executive orders, and directives pertaining to the planning area; and, (2) developing any needed state director guidance, specific to the individual planning effort and the planning area.

Development of the RMP represents the second tier of the planning process, the land use planning tier (figure 1-1). The approved Newcastle RMP will guide future resource and land use management for the BLM-administered public lands in the planning area.

This process of planning for the management of the public lands and resources, and allocating their uses, guides daily operations and activity planning. For a detailed description of the RMP tier of the BLM planning process, please see appendix D.

The third tier of the planning process is activity or implementation planning. During activity planning, the management prescriptions in the RMP are applied (1) to specific geographic areas in developing and implementing site-specific activity plans (for example, allotment management plans, habitat management plans, interdisciplinary, or coordinated activity plans); (2) in issuing various land and resource use authorizations; (3) in identifying mitigation needs; and, (4) in developing and implementing other similar plans and actions.

After completion, the Newcastle RMP will be kept current through minor maintenance or through amendments and revisions, as demands on public lands and resources change, as the land and resource conditions change, or as new information is acquired.

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Currently, the management direction for the public lands administered by the BLM in the planning area is provided by the Newcastle Management Framework Plan (MFP) (USDI, BLM 1981), the decisions for a grazing EIS completed in 1984, and various site-specific activity plans. The purpose for developing the Newcastle RMP is to provide an updated, comprehensive, and environmentally adequate planning and management base for the planning area that is consistent with policy and management changes that have occurred since 1981.

This draft EIS develops the analysis of consequences for current and alternative management of the planning area and provides the basis for developing an RMP. It also seeks to resolve resource and land use issues identified during scoping and associated with current management. It provides direction for site-specific activity planning and implementation of management actions in the future. The approved Newcastle RMP will supersede the existing MFP and other general planning decision documents for the planning area. Until the Newcastle RMP is completed, daily management decisions will continue to be based on the existing planning documents.

When the Newcastle RMP is approved, it will provide a comprehensive framework for management of the public lands in the NRA by the BLM.

DESCRIPTION OF THE PLANNING AREA

The Newcastle Resource Area of the BLM, U.S. Department of the Interior (USDI), is responsible for managing all public lands in Crook, Niobrara, and Weston counties in northeast Wyoming (map 1-1), as well as all public lands in Nebraska. As defined by the FLPMA, the "public lands" are those federally owned lands and interests in lands (for example, federally owned mineral estate) that are administered by the Secretary of the Interior, specifically through the BLM. The planning area for the public lands addressed in this document is only the Wyoming portion of the NRA. The public lands in Nebraska are covered under the Nebraska Resource Management Plan (USDI, BLM 1992).

Within the Newcastle RMP planning area (Crook, Niobrara, and Weston counties, Wyoming) there are varied and intermingled land surface ownerships and overlapping mineral ownerships. Therefore, the administrative jurisdictions for land use planning and for managing the land surface and minerals are also varied, intermingled, and sometimes overlapping (split-estate).

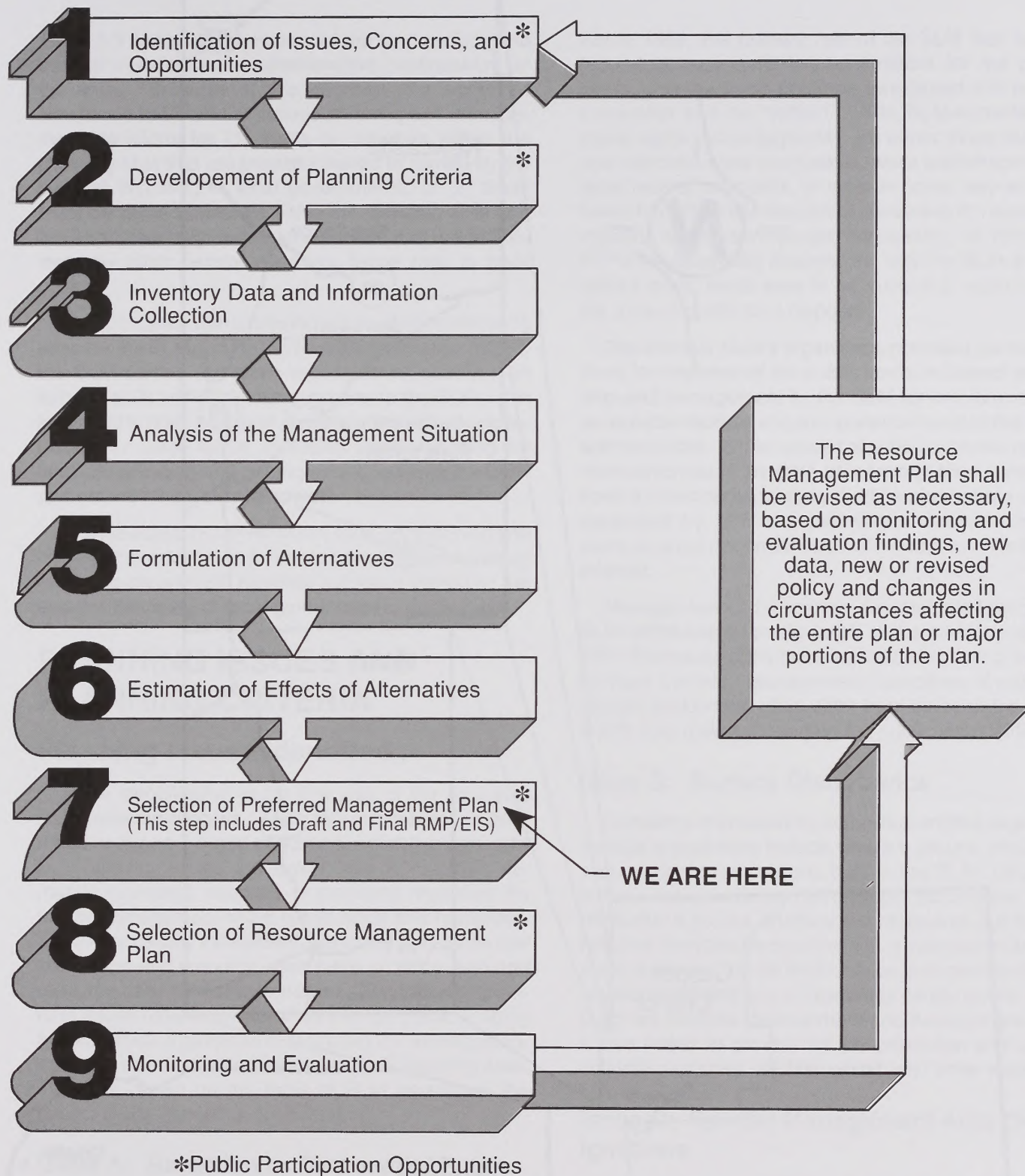
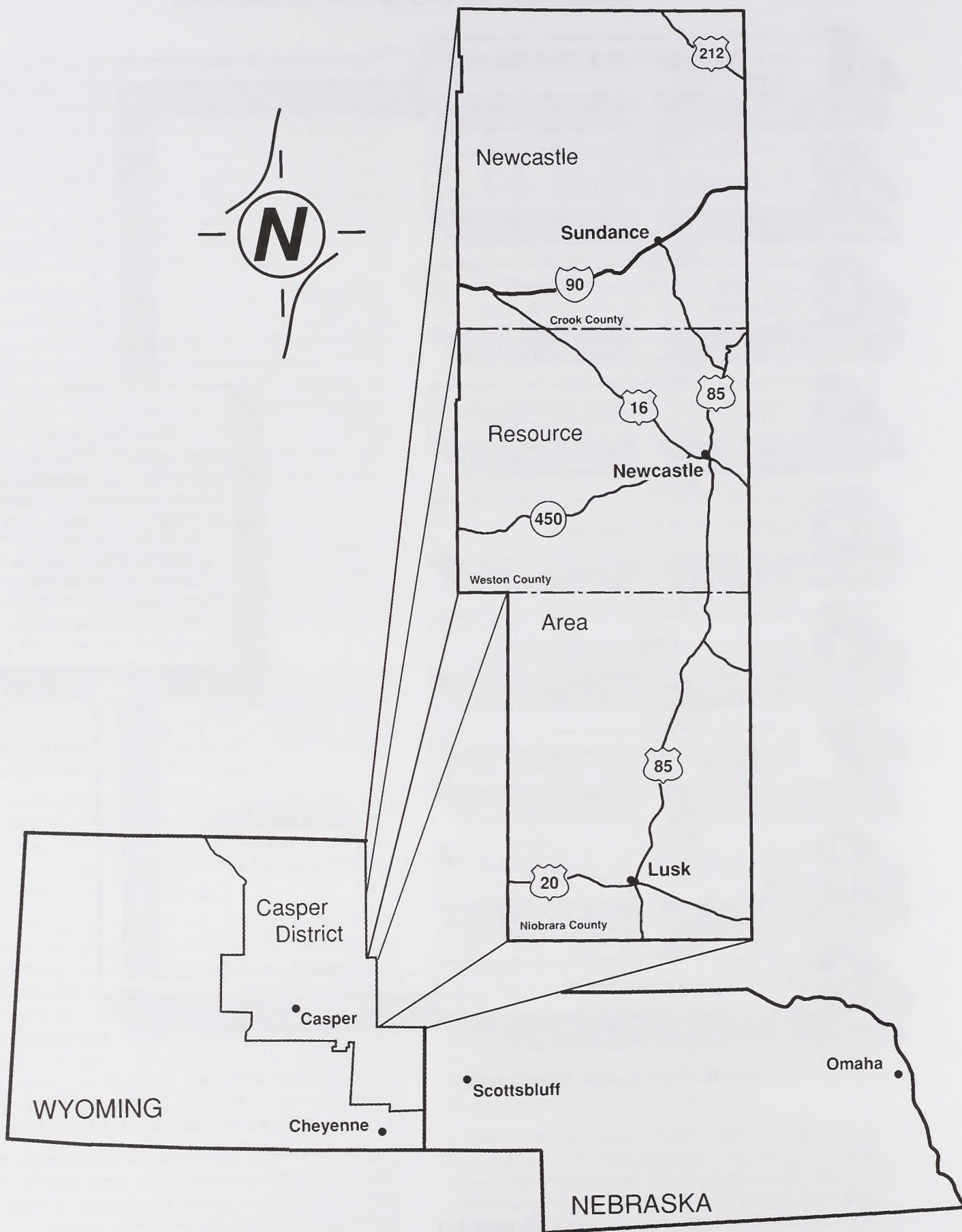


Figure 1-1
Planning Process
Newcastle Resource Area



Map 1-1
General Location
Newcastle Resource Area

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Table 1-1 contains a summary of the land surface and mineral ownership and administrative relationships for the area. Because of this situation, the approved Newcastle RMP will not include planning and management decisions for (1) lands or minerals within the planning area that are privately owned or owned by the state of Wyoming or local governments, or (2) those federally owned minerals within the planning area that are under federally owned land surface that is administered by other federal agencies (large map in back pocket).

In accordance with a memorandum of understanding between the BLM and the Bureau of Reclamation (BOR), the BLM carries out some management activities on federal lands withdrawn for purposes of the BOR. It is important to note, however, that the administrative jurisdiction for these lands, including decisionmaking for land use planning and management, lies with the BOR and not with the BLM.

The Newcastle RMP will not include any planning and management decisions for areas where the land surface and minerals are both privately owned or owned by the state of Wyoming or local governments.

PLANNING ISSUES AND PLANNING CRITERIA

Planning Issues Identified

Issue identification is the first step of the nine-step BLM planning process. The planning process is illustrated on figure 1-1 and described in detail in appendix D. Planning issues are determined from public demands, concerns, conflicts, or problems regarding the use or management of the public lands and resources. These are usually expressed in terms of the effects that some land and resource uses have on other land and resource uses or resource values. The following planning issues have been identified through public scoping and information gathered in analyzing the existing management situation in the Newcastle RMP planning area. They are based on the input of BLM personnel, the public, and interagency consultation.

Issue A: Retention or Disposal of Public Lands

The scattered, isolated public land surface ownership pattern in the planning area is the direct result of several decades of congressionally mandated transfer of federal landownership into private ownership. (Please see the "Surface Ownership" map in the back pocket.) Prior to passage of the Classification and Multiple Use (C&MU)

Act in 1964, the primary role of the BLM was as the federal government's interim landlord for the public lands, until the lands could be transferred into private ownership and be "settled." The BLM-administered public lands remaining today are either those that "no one wanted," were overlooked, were odd-shaped and small survey remnants, or were in some way encumbered from clear title transfer of ownership (for example, litigation of land surveys and ownership). In 1976, the FLPMA substantially changed the way that BLM-administered public lands were to be managed, especially in the area of public land disposal.

The FLPMA, BLM's organic act, provided (for the first time) for retention of the public lands in federal ownership and management by the BLM for environmentally acceptable multiple use and sustained yield of the lands and resources. While transfer of public lands into private ownership was no longer a primary objective, it was still open to consideration and would be appropriate where supported by land use planning and environmental analysis and a determination that it would be in the public interest.

Management of the scattered and isolated parcels of BLM-administered public lands in the planning area is difficult because of their small size and the lack of access to many parcels. Management objectives of adjacent private landowners often differ from those of the BLM, which also makes managing the public lands difficult.

Issue B: Surface Disturbance

Concerns expressed by numerous entities regarding surface disturbance include where it occurs, what kind occurs, how much occurs, how is the BLM mitigating surface disturbance, and is the proper reclamation being done after it occurs. Surface disturbance on public land requires complex evaluation and a complex management approach. While the BLM needs to provide for the development and use of resources on the public lands (such as minerals development and livestock grazing), it also needs to provide for the protection and use of cultural resources, wildlife habitat, and other values.

Issue C: Special Management Area Designations

Several comments and concerns were raised that designation of Whoopup Canyon ACEC and the Stateline SRMA would restrict the use of these areas. The BLM identifies and designates public lands as special management areas to recognize unique or threatened resources. Whoopup Canyon and the Stateline SRMA are examples of this type of designation. Some BLM-administered public lands also contain hazardous sub-

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**TABLE 1-1
LAND AND MINERAL OWNERSHIP IN THE
WYOMING PORTION OF THE NEWCASTLE RMP PLANNING AREA^a**

Areas the Newcastle RMP Decisions Will Cover		Approximate Acreage
A.	Areas where the land surface and mineral estate are both federally owned and are both administered by the BLM (Crook, 92,024; Niobrara, 124,085; Weston, 75,059). ^b	291,168
B.	Areas where the land surface is federally owned and administered by the BLM and the mineral estate is owned and administered by private individuals, the state of Wyoming, or local governments. ^c	1,000
C.	Areas where the land surface is owned and administered by private individuals, the state of Wyoming or local governments and the mineral estate is federally owned and administered by the BLM (Crook, 359,211; Niobrara, 622,237; Weston, 426,250). ^d	1,407,698
Total BLM-administered federal land surface to be covered by RMP decisions.		292,168
Total BLM-administered federal mineral estate to be covered by RMP decisions.		1,698,866
Areas the Newcastle RMP Decisions Will NOT Cover		Approximate Acreage
D.	Areas where the federal land surface is administered by the Forest Service (Black Hills National Forest) and the federal mineral estate is administered by the BLM. ^e	174,743
E.	Areas where the federal land surface is administered by the Forest Service (Thunder Basin National Grassland) and the federal mineral estate is administered by the BLM. ^e	228,627
F.	Areas where the federal land surface is administered by the BOR and the federal mineral estate is administered by the BLM. ^e	16,863
Total BLM-administered federal mineral estate that will NOT be covered by RMP decisions.		420,233
G.	Areas where the land surface and minerals are both owned by private individuals, and the state of Wyoming or local governments; the BLM has no jurisdiction or administrative authority.	2,452,473
Total land surface in the Newcastle RMP planning area (all ownerships).		4,966,559

^aFor the purposes of the Newcastle RMP planning effort, areas where one or more of the mineral resource categories are federally owned are defined and addressed as if all minerals in the area were federally owned. Where mixed minerals ownership occurs (for example, privately owned oil and gas overlapping with federally owned coal in the same area), minerals planning and management decisions in the final RMP will only pertain to the federally owned minerals.

^bIn these areas, the RMP will include planning and management decisions for both the federal land surface and the federal mineral estate.

^cIn these areas, the RMP will include planning and management decisions for only the BLM-administered federal land surface. While the federal surface management decisions may have some effect on the ability to manage and develop the nonfederally owned minerals, the RMP planning and management decisions will not pertain to the nonfederal mineral estate. At the same time, surface and minerals management actions and development activities anticipated in these areas will be taken into account for purposes of cumulative impact analysis in the EIS for the Newcastle RMP.

^dIn these areas, the RMP will include planning and management decisions for only the BLM-administered federal mineral estate. While the land and resource uses and values on the nonfederal surface will be taken in account and will affect development of the federal mineral planning and management decisions, these federal mineral decisions will not pertain to the state and privately owned land surface. At the

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TABLE 1-1 (continued)
LAND AND MINERAL OWNERSHIP IN THE
WYOMING PORTION OF THE NEWCASTLE RMP PLANNING AREA^a

same time, surface and minerals management actions and development activities anticipated in these areas will be taken into account for purposes of cumulative impact analysis in the EIS for the Newcastle RMP.

^aIn these areas, the land surface planning and management decisions are the responsibility of these "other" federal surface management agencies. Any BLM administrative responsibilities within these areas (for example, actions concerning the federal mineral estate) are handled case by case and are guided by the other surface management agencies' policies, procedures, and plans. Thus, the Newcastle RMP will not include planning and management decisions for the federal minerals in these areas. At the same time, surface and minerals management actions and development activities anticipated in these areas will be taken into account for purposes of cumulative impact analysis in the EIS for the Newcastle RMP.

stances, such as high concentrations of hydrogen sulfide gas (H₂S), which require special management attention (Onshore Oil and Gas Order No. 6).

Issue D: Control of Prairie Dogs on BLM-administered Public Lands

Concerns were expressed that BLM would not allow control of prairie dogs on BLM-administered public land.

While BLM would not consider total eradication of prairie dogs from BLM-administered public land surface, resource damage would be documented by BLM personnel when reported by the grazing lessee, adjacent landowners, or other interests. This could include resource damage occurring on private or state lands from prairie dog towns located on BLM-administered public lands. The BLM will continue to annually review with Animal Plant Health Inspection Service, Wildlife Services (APHIS/WS), their annual wildlife damage management plans for animal damage control activities on public lands. Areas where proposed animal damage control activities on BLM-administered public land surface (all or specific methods) are not compatible with BLM planning and management objectives or prescriptions for other resource activities and uses will be identified on a case-by-case basis, and APHIS/WS will be requested to amend or adjust proposed animal damage control activities accordingly. Human health and safety determinations would be made by the Wyoming Department of Health or by officers of the US Centers for Disease Control.

It is important to note that BLM is not refusing to deal with the control of prairie dogs should their numbers increase to pest proportion. If the situation is determined to be a threat to human health and safety, or damaging to natural resources, BLM will implement procedures to diminish the number of prairie dogs on public lands and alleviate any problems created by their escalating population. BLM will coordinate efforts with other federal

authorities, and with the state and local authorities, to implement safe and effective control measures when necessary. BLM is cognizant of its dual role with the state as guardians of wildlife resources and will continue to seek new opportunities to foster a "good neighbor" policy with the state. Prairie dogs and their towns are an important component of the prairie ecosystem and are valuable in providing habitat and a food source for a number of wildlife species, many of which are species of special management concern.

Planning Criteria

Planning criteria are the conditions and guidelines or parameters for conducting the planning effort, for preparing the draft and final EISs for the RMP, and for developing the approved RMP. The planning criteria serve the following purposes:

1. to ensure that the planning effort is focused on the issues, follows and incorporates legal requirements, addresses management of all public land resources and land uses in the planning area, and that plan preparation is accomplished efficiently;
2. to identify the scope and parameters of the planning effort for the decision maker, the interdisciplinary planning team, and the public; and,
3. to inform the public of what should and should not be expected from the RMP, including identification of any planning issues that are not ready for decision-making in the RMP and that will be addressed only through subsequent planning efforts.

Planning criteria are based on standards prescribed by laws and regulations; guidance provided by the BLM Wyoming State Director; the results of consultation and coordination with the public, other agencies, governmental entities, and Indian tribes; analysis of information pertinent to the planning area; public input; and, professional judgment. The general planning process de-

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scribed in appendix D has been developed to help focus the preparation of planning and management alternatives and the analysis of their impacts, and to guide selection of the preferred alternative for the draft EIS. Additional planning criteria may be identified as the planning process progresses.

Criteria for Use of Mitigation Guidelines

The Wyoming BLM has developed “mitigation guidelines” for use in determining the types and levels of mitigation needed to protect important resources from actions involving surface-disturbing and other human-presence disturbance or disruptive activities. These guidelines are used in the RMP process for (1) developing the alternatives for the EIS and analyzing the impacts of the alternatives; and (2) as part of the planning criteria for developing the alternatives and for determining mitigation requirements to be included in the approved RMP. The “Wyoming BLM Mitigation Guidelines for Surface-disturbing Activities” are detailed in appendix E, which also contains further information on how they are used in the RMP process.

Mitigation requirements (including restrictions on surface occupancy and/or surface activity and use) are applied as conditions of land and resource use for the following reasons: (a) to protect important cultural resources, recreational values, and wildlife resources (including T&E and candidate species); (b) to minimize soil movement on slopes; (c) to minimize disturbance of vegetation in sensitive areas such as wetland/riparian areas; or (d) to protect visual resources and historic trails.

As appropriate, surface-disturbing activities would be subject to one or more of the mitigation requirements exemplified in the mitigation guidelines. On lands where the federal surface is administered by other agencies and the federal mineral estate is administered by the BLM, the Wyoming BLM mitigation guidelines would only be applied where the surface managing agency has not developed other surface protection mitigative measures or stipulations that are needed. The mitigation guidelines would be applied to land surface areas that are privately owned or owned by the state of Wyoming or local governments only in cases where those lands overlay BLM-administered federal minerals and only in situations where the mineral actions authorized by the BLM could (a) cause adverse on-site or off-site effects on T&E or candidate species or on cultural resource values; or (b) cause adverse off-site effects on any resource values on any other lands.

Mitigation requirements ultimately included in the approved RMP, that are developed through the use of the mitigation guidelines, could later be waived, modi-

fied, excepted, or combined with other conditions of resource use. Circumstances which would warrant these changes are as follows: (a) as a result of addressing situations beyond the analysis level of the EIS (for example, development and analysis of an activity plan or a site-specific project proposal); (b) if the conditions that originally warranted a restriction (such as the presence of an active raptor nest) no longer exist; or, (c) if the location of a proposed activity or use were to be moved to avoid such conditions. Conversely, mitigation requirements that are not identified in the approved RMP could be applied to address situations or resource values either not present or not identified at the time the RMP was developed, but that were later identified through site-specific investigations. An example where mitigation requirements might be used could be on a newly discovered raptor nest or newly identified cultural resources. Addition or modification of mitigation requirements generally would be allowed as long as modified conditions of use did not prohibit the exercise of valid existing rights.

Criteria for Coal Screening Process

The coal screening process (including application of the coal unsuitability criteria) under 43 CFR 3461 will not be conducted for the planning effort. Any interest in coal exploration or leasing will be handled on a case-by-case basis. If an application for a coal lease is received sometime in the future, an appropriate land use environmental analysis will be conducted (which will include conducting the coal screening process), to determine whether or not the coal areas applied for are acceptable for development and leasing consideration. The RMP will be amended as necessary. To date, there has been no interest expressed to the BLM for leasing and development of BLM-administered federal coal in the planning area.

Criteria for Healthy Rangelands

The Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming (S&Gs) were approved by the Secretary of the Interior on August 12, 1997. They have been included in this document as appendix F.

The Secretary of the Interior approved the Wyoming BLM S&Gs to aid in achieving the four fundamentals of rangeland health outlined in the grazing regulations (43 CFR 4180.1). These four fundamentals are: (1) watersheds are functioning properly; (2) water, nutrients, and energy are cycling properly; (3) water quality meets state standards; and, (4) habitat for special status species is protected. The standards apply to all resource

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uses on public lands while the guidelines apply specifically to livestock grazing practices. The S&Gs are used to aid in developing alternatives for the EIS and in considering appropriate management actions necessary to implement the S&Gs.

As appropriate, management objectives and actions described for each alternative addressed in the EIS would generally be subject to all of the standards. In addition, the livestock grazing management objectives and actions for each of the alternatives would be subject to both the standards and the guidelines. Therefore, actions to implement the S&Gs (including mitigation measures) in the planning area are described in the descriptions for each alternative. Because the S&Gs provide policy guidance (first tier of the BLM planning process; figure 1-1) they apply to all alternatives. However, the intensity of objectives and actions to implement the S&Gs may vary by alternative. Additional site specific actions to implement the S&Gs will be developed on a case-by-case basis through site-specific activity planning (third tier of the planning process; figure 1-1).

Criteria for Special Situations

Hydrocarbon Potential

As an aid in developing alternatives for this draft EIS, special criteria were developed relative to the leasing and development of carbon-based minerals (oil and gas). Using available geologic information, reports of past production, and information from the minerals industry, the Newcastle Resource Area was divided into regions of high, moderate, and low potential for the occurrence and development potential of hydrocarbons. The estimates of oil and gas activity presented under each alternative in table 2-1 (in chapter 2) were developed from analysis of past activity and production. Because they are general, these occurrence and development potential classifications and production estimates are appropriate for planning purposes, but they are not appropriate for, nor are they intended to predict, future specific activity or the specific locations of new discoveries.

Locatable Minerals Potential

Special criteria were developed relative to the potential for occurrence of locatable minerals such as uranium and bentonite. Areas of high, moderate, and low potential were derived to facilitate analysis of the effects that the variety of other land and resource uses and management actions would have on locatable minerals development. This evaluation is only based on a representative analysis by inference and does not imply that there may or may not be other, undiscovered locatable minerals of economic value in the Newcastle RMP planning area.

Areas with high potential for the occurrence of locatable minerals include areas with current or past mining activity and areas where mineral occurrence has been proven from past exploration activities, such as stratigraphic test holes. Areas with moderate potential have geologic formations known to include locatable minerals and where existing or previous mining claims have been located. Low potential areas have no geological formations known to contain minerals of interest.

Withdrawals and Classifications

Under sections 202(d) and 204(l) of the FLPMA, any classification or withdrawal on BLM-administered public land is subject to periodic review to determine whether or not it is serving its intended purpose and is still needed. These reviews can be conducted during the land use planning process. This may result in some classifications and withdrawals being modified or terminated and the management direction for the areas involved are also updated or developed in the course of completing the planning process. The criteria for conducting these reviews in the course of the Newcastle RMP planning effort are presented below.

Withdrawals Under Other Agency Jurisdiction.

The withdrawal review requirement of the FLPMA has not yet been completed on those federal lands withdrawn for purposes of other federal agencies (for example, those under the jurisdiction of the National Park Service (NPS) and the BOR). For the purposes of the EIS for the Newcastle RMP, it must be assumed that this will continue to be the case, and that the planning and management authorities for these lands will remain with those agencies.

The Newcastle RMP will not include any planning or management decisions for either the federal land surface or federal minerals within the administrative boundaries of such agencies. These lands were considered in conducting the environmental analysis for the EIS for the Newcastle RMP in terms of cumulative impacts and in terms of how they may be affected by management in the planning area or vice versa.

Withdrawals and Classifications Under BLM Jurisdiction. Where the review of withdrawals and classifications on any lands under BLM jurisdiction results in determining that any part of the withdrawals or classifications are no longer serving their intended purposes and are to be terminated, the planning and management decisions for the affected areas will also be reviewed to determine if and how the management of the involved lands should change. This latter review is done as an integral part of the EIS process to establish any needed changes in the management of the involved lands before the existing withdrawals or classifications are termi-

PURPOSE OF AND NEED FOR THE ACTION

nated, and includes consideration of whether or not new withdrawals or classifications, for other purposes, should be placed on any of the lands in question.

For purposes of providing an adequate comparison of impact analyses in the EIS, under Alternative A (the "No Action" Alternative), all existing withdrawals and classifications and their segregative effects are assumed to continue in effect. The other alternatives will address various changes in management for the areas where termination of withdrawals or classifications under BLM jurisdiction are being considered.

Wilderness and Wild Horse Management

Wilderness management and wild horse management will not be addressed in the Newcastle RMP planning effort. There are no wilderness areas or wilderness study areas on BLM-administered public lands in the planning area. In addition, there have been no other areas with wilderness characteristics identified on public lands in the planning area. There are no known wild horses or wild horse herd management areas in the planning area.

CHAPTER 2

THE ALTERNATIVES

INTRODUCTION

The basic goal in formulating alternatives for an RMP is to identify combinations of management practices for and uses of the public lands and resources that would resolve the planning issues. Each alternative is to represent a complete and reasonable interdisciplinary (or multiple use) land use plan to guide future management of the public lands and resources in the planning area. One alternative, the No Action Alternative, represents the continuation of present management. The other alternatives provide a range of choices for solving problems associated with present management. Problems with present management are identified through scoping and issue identification for the planning process, which includes public involvement.

Analysis of impacts that would be associated with the alternatives is required by BLM planning regulations and the NEPA-based CEQ regulations. Comparison of the differences among the alternatives is also required. Based on this comparative analysis, BLM managers are able to choose a preferred alternative. The preferred alternative selected may be one of the initial alternatives considered, it may be made up from portions of two or more of those alternatives, or it may be a completely different alternative.

This chapter presents four alternative resource management plans, including BLM's Preferred Alternative for managing the public lands and resources in the Newcastle RMP planning area. Alternative A, the "No Action" Alternative, would continue present management practices on the basis of existing land use plans. The other alternatives suggest different combinations of emphasis for management of the various resources and land uses on the BLM-administered public lands on the basis of needs, opportunities, and public demand. Of the four alternatives, the BLM believes the Preferred Alternative, which was developed by combining parts of alternatives A, B, and C, and incorporating public input, provides the best balance of production or commodity uses with protection of the environment.

Under the Preferred Alternative, management emphasis would be generally oriented toward managing the BLM-administered public lands for conservation of natural resources, providing for and sustaining the biodiversity (diversity of plant and animal species) in the planning area, and enhancing and sustaining the viability of ecosystems that occur in the planning area. Known areas of species diversity richness in the planning area include riparian, stream and drainage areas, and the transition areas between physiographic zones along the

edges of the Black Hills. Under the Preferred Alternative, management in these areas would be directed toward maintaining those diverse values. In general, vegetative resources would be managed to provide and maintain appropriate habitat for vertebrate and nonvertebrate species of wildlife in some parts of the planning area, when conflicts with those values exist in other parts of the planning area. Under the Preferred Alternative, a concept of comprehensive ecosystem management would be practiced to ensure that man's use of the BLM-administered public lands and the development and enjoyment of resource products and values they contain would be provided in ways that sustain healthy and productive ecosystems for future generations.

Future studies must be conducted to determine boundaries of ecoregions and ecosystems that involve part or all of the planning area, to determine goals and objectives for managing ecoregions and ecosystems, and to determine various management actions that may be undertaken on the BLM-administered public lands to help achieve those objectives. These studies and determinations will be part of the activity planning and management implementation aspects following approval of the Newcastle RMP. If necessary, the RMP would also be amended in the process.

OTHER MANAGEMENT OPTIONS CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Several possible resource management options were identified by members of the interdisciplinary team during the planning process. Some of these options were not carried forward for detailed analysis because they were unreasonable or not viable because of technical, legal, or other constraints. Each of these options is presented below.

Livestock Grazing Options

A full range of management options was presented and analyzed in the Newcastle Resource Area Grazing EIS (USDI, BLM 1983); therefore, that analysis will not be repeated here. The approved decisions for the grazing EIS have been incorporated into this draft EIS for the RMP.

The elimination of livestock grazing from all public lands in the planning area was considered as a possible

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method of resolving some of the planning questions related to vegetative resources. However, on the basis of work done by the interdisciplinary team and managers, the “no grazing” alternative was eliminated from detailed study for the following reasons.

Resource conditions, including range vegetation, watershed, and wildlife habitat do not warrant a prohibition of livestock grazing throughout the planning area. However, reduction or elimination of livestock grazing may be necessary in specific situations where livestock grazing would significantly conflict with other management objectives. Such decisions, which would be determined during activity planning, would be based on the results of monitoring and studies, among other factors.

Public comments received during the scoping process and during preparation of the draft EIS indicated a general acceptance of livestock grazing on the public lands, provided such grazing is properly managed.

Because of the fragmented landownership pattern in the planning area, either exchanges to “block up” public lands would be required or extensive fencing would be needed to exclude livestock from public lands. It is doubtful that enough exchanges with private landowners could be accomplished to sufficiently “block up” public lands, and the amount of fencing needed to exclude livestock from the public lands would be economically unfeasible, would excessively restrict wildlife movement, and would restrict public access.

Elimination of Timber Harvesting

Elimination of all timber harvesting on public lands in the planning area was considered. However, the 25,300 acres of forestlands capable of sustaining forest production need to be harvested over time to maintain a healthy, vigorous forest ecosystem. Because fire and, to an extent, disease have been eliminated by human influence, the harvesting of forest products helps sustain the ecological processes that maintain the healthy condition of the forest. Further, there is sufficient local demand to warrant continued forest harvest. Finally, not harvesting forest products would be contrary to the BLM’s forest management policy as established in the draft BLM manual section 5000 under “Forest Land Policy Statement,” “Public Domain Timber Management Policy,” and “Woodlands Management Policy Statement.”

Elimination of Mineral Leasing and Mineral Material Sales

One option considered was closing the planning area to federal mineral leasing and sale of federal mineral materials, such as sand and gravel. This option was

dropped from further analysis because it is unnecessary. The leasing and sale of federal minerals and mineral materials are discretionary actions and within BLM’s authority and responsibility to determine where they may occur and the conditions under which the minerals and materials may be explored and developed. In addition, this option would be directly contrary to the BLM’s multiple use directives in FLPMA and would not be in the best national interest.

Elimination of Restrictive or Protective Stipulations from Development and Surface-disturbing Activities

This alternative was not analyzed in detail because it could not provide the minimum environmental protection requirements of law.

Elimination of Oil and Gas Leasing in Areas With High Hydrogen Sulfide Potential

This option was considered to protect human health and safety in an area of Niobrara County that contains as much as 55% hydrogen sulfide (map 3-8 in chapter 3). Two proposals were identified: 1) to close the area to leasing, and 2) to allow leasing in the area, but restrict drilling to zones above the hydrogen sulfide-bearing formations. This option was not analyzed in detail because hydrogen sulfide mitigation procedures, described in Onshore Oil and Gas Order Number Six and appropriate state of Wyoming regulations, are considered adequate to protect the public health and safety. More detailed information on hydrogen sulfide can be found in chapter 3 in the “Geologic Hazards” section.

Restriction of Development or Activity in Areas Containing High Amounts of Selenium

Selenium in potentially toxic amounts may be present in a northwest to southeast band across the resource area. In addition, selenium indicator plants are present in the NRA. No indication of selenium-related problems due to inhalation or ingestion of this mineral have been identified by grazing lessees, the mineral industry, the general public, or other federal agencies. Selenium levels may become hazardous in reservoirs that operate as closed systems in soils containing selenium, especially in soils derived from Cretaceous shales. It has been determined that no restrictive action is appropriate at this time. If new information becomes available,

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public land users will be notified of the potential hazard. More detailed information on selenium can be found in chapter 3 in the “Geologic Hazards” section.

ALTERNATIVES ANALYZED IN DETAIL

Table 2-1 is a comparative summary of alternative resource management plans, including BLM’s Preferred Alternative for managing the public lands and resources in the Newcastle RMP planning area. Alternative A, the

“No Action” Alternative, would continue present management practices on the basis of existing land use plans. The other alternatives suggest different combinations of emphasis for management of the various resources and lands uses on the BLM-administered public lands on the basis of needs, opportunities, and public demand. The BLM believes the Preferred Alternative, which was developed by combining parts of alternatives A, B, and C provides the best balance of production or commodity uses with protection of the environment. The environmental consequences (impacts) of the alternatives are summarized in chapter 4.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
AIR QUALITY MANAGEMENT	MANAGEMENT OBJECTIVE: Maintain or enhance air quality, protect public health and safety and sensitive natural resources, and minimize emissions that could result in acid rain, violations of air quality standards, or reduced visibility. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: All BLM-administered public lands would be managed to maintain the air quality at the current prevention of significant deterioration (PSD) Class II standard. BLM-initiated or authorized actions, such as the use of prescribed fire, would avoid violation of Wyoming and national air quality standards.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Requirements would be applied to authorized actions and activities on a case-by-case basis to avoid air quality problems. Requirements could include limiting emissions, restricted spacing of project locations, and controlling dust from surface-disturbing activities.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	BLM would coordinate with Wyoming Department of Environmental Quality (DEQ) and the Environmental Protection Agency (EPA) on air quality standards and regulations as needed.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 2-1
Summary of Alternatives, Including the Preferred Alternative**

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
AIR QUALITY MANAGEMENT (continued)	BLM would coordinate and cooperate with other federal and state agencies in monitoring and collecting air quality data.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
CULTURAL RESOURCES (all public land interests only)	MANAGEMENT OBJECTIVE: Protect, preserve, interpret, and manage significant cultural resources; manage cultural resources for information potential, public and educational values, and conservation.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Data would be collected on the nature and condition of significant cultural sites on public lands. Site protection measures would be initiated for significant sites as needed. Cultural resource project plans would be developed for the more sensitive sites.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Sites listed on the National Register of Historic Places (NRHP) would be appropriately protected. Investigations of violations of the Archaeological Resources Protection Act would be conducted.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Site-specific inventories for cultural resources would be required before the start of surface-disturbing activities. Adverse effects on significant resources would be mitigated, or the resources themselves would be avoided by surface-disturbing activities.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
CULTURAL RESOURCES (continued) (all public land interests only)	The BLM would cooperate with other agencies and private landowners to identify and interpret historic trails.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Areas within 1/4 mile or the visual horizon, whichever is closer, of significant segments of historic trails that are listed on the NRHP, or are eligible for listing on the NRHP, would be avoidance areas for surface-disturbing activities.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	As appropriate, specific sites on public lands would be managed for their traditional Native American cultural values.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
FIRE MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: To cost effectively protect life, property, and resource values from wildfire and to use prescribed fire to achieve multiple use management goals. (Also, see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Fires in limited suppression areas would be monitored to ensure they do not threaten state or private lands, property, oil and gas fields, important riparian habitat, or human life.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
FIRE MANAGEMENT (continued) (public land surface only)	Full suppression would be used on fires endangering human life or that spread to within ¼ mile of state or private lands, property, oil and gas fields, and important riparian habitat.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Some methods of suppression would be restricted in sensitive areas. This may include, but would not be limited to, restricting heavy equipment on cultural or historic sites (for example, Whoop-up Canyon). All wildfires would be evaluated to determine the need for rehabilitation or restoration measures.	There would be no restrictions on suppression methods.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Restoration of burned areas would be by natural succession unless a special need is identified to prevent further resource damage.	Same as Preferred Alternative.	Restoration of burned areas would emphasize establishing vegetative cover to prevent erosion and to encourage desired plant species.	Restoration of burned areas would be designed to achieve a plant community tailored to the anticipated uses of the area.
	Prescribed burning would be used as a resource management tool on public land surface. Activity plans would be prepared to address specific applications in accordance with multiple use resource management objectives.	Same as Preferred Alternative.	Prescribed burning would not be used as a management tool.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
FIRE MANAGEMENT (continued) (public land surface only)	Prescribed burning would be conducted so that the Class II air quality standard would be maintained. A Wyoming DEQ permit would be required before any prescribed burning is done. Smoke and pollution would be minimized as described in the <i>Smoke Management Guidebook</i> (USDI, BLM 1985).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Use of fire for disposal of slash and residue from timber sales and thinning activities would occur when necessary to reduce the danger of wildfire and to reduce the volume of slash and debris or hazardous fuel levels in an area.	Same as Preferred Alternative.	Fire would be used for disposal of slash and debris from timber sale and thinning areas.	Same as Preferred Alternative.
FOREST RESOURCES MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Maintain and enhance the health, productivity, and biological diversity of forest and woodland ecosystems. Provide a balance of natural resource benefits and uses, including opportunities for commercial forest production. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Public lands available for management of forest products (11,935 acres) would be managed by implementing sound silvicultural activities that include two- or three-cut shelterwood harvest, commercial, and precommercial thinnings.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
FOREST RESOURCES MANAGEMENT (continued) (public land surface only)	The maximum allowable harvest level would be set at 4.7 million board feet (mmbf) per decade. Timber would be harvested on an evenflow basis.	Same as Preferred Alternative.	The maximum allowable timber harvest would be set at 13.9 mmbf the first decade, 9.7 mmbf the second and third decades, then dramatic declines in the next four decades.	Same as Preferred Alternative.
	Road construction for harvesting timber or for conducting forest management practices would be prohibited on slopes greater than 25%, unless site-specific environmental analyses demonstrate that adverse effects can be mitigated or avoided.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Skidder-type yarding would be prohibited on slopes greater than 45%. Other logging operations on slopes steeper than 45% would be limited to technically, environmentally acceptable methods such as cable yarding.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Management of forest products on approximately 3,864 acres would be limited because of slope restrictions or inaccessibility for mechanical harvest methods.	Same as Preferred Alternative.	Approximately 3,864 acres would be managed by implementing silvicultural activities that include two- and three-cut shelterwood harvest, commercial, and precommercial thinnings.	Same as Preferred Alternative.
	About 9,084 acres would be made available for forest products harvest only when tailored specifically to benefit other identified resource values.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
FOREST RESOURCES MANAGEMENT (continued) (public land surface only)	About 417 acres of forestlands are not available for management of timber products due to unique situations (for example, riparian areas, ACEC designation, and VRM classifications).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Roads and landings developed for forest products removal would be rehabilitated unless it was determined that they were useful for other management purposes.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	About 600 acres of timber stand improvement and precommercial thinning would be conducted per decade.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	To maintain biodiversity and the old growth component of the forest ecosystem, forested areas on public lands would be managed to maintain approximately 5% old growth.	Old growth components of forested lands on BLM-administered public surface would not be maintained.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Minor forest products (firewood, posts, poles, Christmas trees, and other minor products) would be made available on a demand basis.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
GEOLOGY AND MINERAL RESOURCES MANAGEMENT (BLM-administered federal minerals)	MANAGEMENT OBJECTIVE: Maintain or enhance opportunities for mineral exploration and development while maintaining other resource values. (Also see appendix F).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<i>General</i>				

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
GEOLOGY AND MINERAL RESOURCES MANAGEMENT (continued) (BLM-administered federal minerals) <i>General</i>	MANAGEMENT ACTIONS: Surface-disturbing and disruptive activities associated with all types of minerals exploration and development and with geophysical exploration would be subject to appropriate mitigation measures as described in appendix E.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<u>Leasable Minerals</u> Coal	Coal classifications on about 194,500 acres of federal coal lands in the planning area would be terminated. These land classifications, for the protection of the federal coal, are no longer serving or needed for their intended purpose.	Coal classifications for the protection of the federal coal on about 194,500 acres of federal coal lands in the planning area would remain in effect.	Same as Preferred Alternative.	Same as Preferred Alternative.
	As coal lease applications are received, the coal screening process, including application of the coal unsuitability criteria, would be applied on a case-by-case basis. The Newcastle RMP would be amended if necessary.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
Oil and Gas	MANAGEMENT ACTIONS: Parcels would be leased with Wyoming standard oil and gas lease stipulations.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
GEOLOGY AND MINERAL RESOURCES MANAGEMENT (continued) (BLM-administered federal minerals) Other Leasable Minerals	MANAGEMENT ACTIONS: Leasing of other leasable federal minerals would be considered on a case-by-case basis and would be subject to the same or similar resource protection and mitigation requirements as those applied to oil and gas leases and rights-of-way.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<u>Locatable Minerals</u>	MANAGEMENT ACTIONS: Other than lands withdrawn from mineral location (table 3-7), the planning area would be open to mineral location, exploration, and development.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	A plan of operations would be required for any surface-disturbing activity, regardless of size, in designated ACECs and in areas closed to off-road vehicular travel.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<u>Salable Minerals</u>	MANAGEMENT ACTIONS: Other than areas that would be closed, the BLM-administered federal mineral estate in the planning area would be open to mineral materials sales and development subject to appropriate conditional requirements (table 3-7).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
GEOLOGY AND MINERAL RESOURCES MANAGEMENT (continued) (BLM-administered federal minerals)	Extraction of mineral materials would be permitted from BLM-administered public surface sites whenever possible to avoid use of private lands where the mineral materials are federally owned.	Same as Preferred Alternative.	Same as Preferred Alternative.	Extraction of mineral materials would be made available to other agencies and municipalities without regard to surface ownership.
<u>Salable Minerals</u> (continued)	Free use of mineral materials from split-estate lands (nonfederal surface over federal minerals) would be discouraged whenever possible and would be allowed only when public land surface sites are not available.	Same as Preferred Alternative.	Same as Preferred Alternative.	Free use of mineral materials from split-estate land (nonfederal surface over federal minerals) would not be discouraged.
	Mineral material sale areas, free use areas, community pits, and common use areas would be established as needed in accordance with other resource uses and values.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	A reclamation plan would be required for all surface disturbance.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Reclamation of private land surfaces would be the responsibility of the entity requesting the use in agreement with the private surface owner.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
GEOLOGY AND MINERAL RESOURCES MANAGEMENT (continued) (BLM-administered federal minerals) <i>Geologic Hazards</i>	MANAGEMENT ACTIONS: Any request received by the BLM for a permitted activity on public land surface in a landslide area would be evaluated to determine if there is a threat to public health or safety (map 3-8). Specific construction requirements may be required in these areas.	No special consideration would be given to potential landslide areas on public land surface unless a specific problem were identified during a permitted activity.	Same as Preferred Alternative.	Same as Preferred Alternative.
<i>Geophysical Exploration</i>	MANAGEMENT OBJECTIVE: Provide opportunity for exploration of mineral resources and geologic data, while protecting other resource values on BLM-administered public land surface. (Also see Appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: All parts of the planning area that are open to oil and gas leasing, exploration, and development would be open to geophysical exploration subject to appropriate mitigation requirements. Mitigation may include seasonal use restrictions, restrictions during wet or muddy periods, explosive charge restrictions, and other restrictions where disturbance in an area is determined to be undesirable.	Same as Preferred Alternative.	There would be no restrictions on geophysical exploration activities.	Same as Preferred Alternative.
	Explosive charges would not be allowed if environmental analysis shows that unacceptable adverse impacts would occur.	There would be no restrictions for the use of explosive charges.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
GEOLOGY AND MINERAL RESOURCES MANAGEMENT (continued) (BLM-administered federal minerals)	On lands where surface-disturbing activities would be prohibited or on public lands closed to ORV use (see Glossary), casual use geophysical exploration would be allowed. (Casual use for geophysical exploration is described in 43 CFR 3150.05(b).)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<i>Paleontology Resources</i> (all public land interests)	MANAGEMENT OBJECTIVE: Manage paleontological resources that are part of the BLM-administered public land surface estate for their informational, educational, scientific, and recreational uses.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Vertebrate fossils could be collected from public land only under a paleontological resources use permit issued by the BLM.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	A paleontological resources use permit issued by the BLM may be required for the collection of noteworthy plant and invertebrate fossils from public lands.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Individuals may collect up to 25 pounds of petrified wood, plus one piece, per day from public land surface. They may collect a total of 250 pounds per year without a permit. However, this material is for personal use only and may not be sold, bartered, or traded.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
GEOLOGY AND MINERAL RESOURCES MANAGEMENT (continued) (BLM-administered federal minerals)	Individuals may collect reasonable amounts of common invertebrate fossils for personal use. This material may not be used for commercial purposes.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<i>Paleontology Resources</i> (continued)	Assessment and/or mitigation of impacts to those resources may be required on federal mineral leases in accordance with BLM policy. If suspected fossil materials are uncovered during construction, the operator would be required to stop work immediately and contact the authorized BLM officer. Activities would be brought to a halt until the authorized officer can assess the situation and advise whether any mitigating measures need to be undertaken before the operations can continue. If fossils are found and operations are adversely affected, a suspension of operations would be granted.	Same as Preferred Alternative.	A complete paleontological inventory identifying important formations would be completed for the entire planning area.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
HAZARDOUS MATERIALS AND OTHER HAZARDS MANAGEMENT (public land interests only)	MANAGEMENT OBJECTIVE: Protect public and environmental health and safety on BLM-administered public lands, comply with applicable federal and state laws, prevent waste contamination due to any BLM-authorized actions, minimize federal exposure to the liabilities associated with waste management on public lands, and integrate hazardous materials and waste management policies and controls into all BLM programs. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: For BLM-authorized activities that involve hazardous materials or their use, precautionary measures would be used to guard against releases or spills into the environment.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	When discovered, BLM-administered public land sites contaminated with hazardous wastes would be reported, secured, and cleaned up according to applicable federal and state regulations and contingency plans. Parties responsible for contamination would be liable for cleanup and resource damage costs, as prescribed in federal and state regulations.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1

Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
HAZARDOUS MATERIALS AND OTHER HAZARDS MANAGEMENT (continued) (public land interests only)	If hazards should be identified, the BLM would provide appropriate warnings and establish precautions for safety hazards associated with the use of any areas on BLM-administered public lands.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
LANDS AND REALTY MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Support the multiple-use management goals of the various BLM resource programs; respond to public requests for land use authorizations, sales, and exchanges; and, acquire access to serve administrative and public needs. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Utility/transportation systems would be located adjacent to existing utility/transportation systems whenever practical. Areas to be avoided for new facility placement and routes would be identified on a case-by-case basis rather than attempting to establish new utility corridors.	Same as Preferred Alternative.	Utility corridors would be established on BLM-administered public land surface to include as many existing facilities as possible. Future rights-of-way would be routed through these corridors whenever possible.	Same as Preferred Alternative.
	Areas within ¼ mile of developed or semideveloped recreation sites would be avoidance areas for development activities such as roads, power lines, pipelines, and well pads. This requirement could be modified by the authorized officer. However, these areas would be open to development activities specifically for the purpose of recreation site facilities.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
LANDS AND REALTY MANAGEMENT (continued) (public land surface only)	Projects would be designed to meet the objectives of the established visual classifications and would include appropriate mitigation. Facilities, including those related to existing or new wells, structures, power lines, and linear rights-of-way would be screened, painted, or designed to blend with the surrounding landscape.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Areas within 500 feet of 100-year floodplains, wetlands, or perennial streams on BLM-administered public lands would be avoidance areas for surface-disturbing activities unless modified by the authorized officer.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Wyoming mitigation guidelines (appendix E) for surface-disturbing and disruptive activities would be used to determine mitigation requirements or needs on a case-by-case basis.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Landownership adjustment actions involving BLM-administered public lands (exchanges or sales, recreation and public purpose (R&PP) leases and patents, withdrawals and transfers of administrative jurisdiction of public lands) would be considered on a case-by-case basis.	Same as Preferred Alternative.	Landownership adjustments would not be pursued.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
LANDS AND REALTY MANAGEMENT (continued) (public land surface only)	The preferred method of land-ownership adjustment would be land exchanges. Appendix B outlines the landownership strategy to be followed.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	There would be no requirement to avoid reduction of public land acreages.	Same as Preferred Alternative.	Exchanges would require that the total acreage of BLM-administered public lands in the planning area would not decline.	Same as Preferred Alternative.
	The planning area would be open to operation of the public land laws except for the 1,152 acres closed to location, sale, or entry (437 acres power site classification; 715 acres Forest Service withdrawal; table 3-7; map 3-9).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The coal classifications that segregate 194,520 acres of coal from disposal would be removed since they no longer serve the purpose for which they were intended.	Coal classifications on 194,520 acres of public land would remain in effect.	Same as Preferred Alternative.	Same as Preferred Alternative.
	As determined on a case-by-case basis, easements would be pursued to provide access to public lands to support the objectives of other resource programs.	Same as Preferred Alternative.	No attempt would be made to acquire additional access to public lands.	Same as Preferred Alternative.

Table 2-1

Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
LIVESTOCK GRAZING MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Maintain or improve forage production and range condition to provide a sustainable resource base for livestock grazing on the public lands while improving wildlife habitat and watershed. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Livestock grazing on BLM-administered public lands would be authorized in a manner consistent with sound range management principles and to be consistent with other resource values.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The authorized grazing use on the BLM-administered public land surface would not exceed recognized active preference (48,818 animal unit months--AUMs).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Implementation of grazing management plans, monitoring studies, and the construction of range improvements based on identified need would continue unless documented damage to other resource values is shown.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
LIVESTOCK GRAZING MANAGEMENT (continued) (public land surface only)	BLM would coordinate efforts with other federal authorities and with state and local authorities to implement safe and effective prairie dog control measures on public lands when prairie dogs are determined to be a threat to human health and safety or are causing resource damage. Resource damage would be documented by BLM personnel from the resource area office when reported by the grazing lessee, adjacent landowners, or other interests. This could include resource damage occurring on private or state lands from prairie dog towns located on BLM-administered public lands. Animal damage control activities would be subject to established procedures and policies as outlined in the national and state level memoranda of understanding between BLM and APHIS and the animal damage control plan for the planning area. Human health and safety determinations would be made by the state of Wyoming, Department of Health or by officers of the US Center for Disease Control.	Prairie dog control on public lands would be conducted when requested by a grazing lessee or adjacent landowner	Same as Preferred Alternative.	Same as Preferred Alternative.
	There would be no control of the size of prairie dog towns on public lands unless resource damage were occurring or human health and safety were threatened.	Same as Preferred Alternative.	Prairie dog towns would not be allowed to exceed the size of the town as of October 1, 1992.	Size limitations of prairie dog towns on public lands would be determined on a case-by-case basis.

**Table 2-1
Summary of Alternatives, Including the Preferred Alternative**

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
LIVESTOCK GRAZING MANAGEMENT (continued) (public land surface only)	New prairie dog towns would be allowed to become established on public lands.	Same as Preferred Alternative.	New prairie dog towns would not be allowed to become established on public lands.	Same as Preferred Alternative.
	Unless one of the above situations were occurring, prairie dog control on BLM-administered public land in the resource area would not be allowed. Prairie dogs and their towns are an important component of the prairie ecosystem and are valuable in providing habitat and a food source for a number of wildlife species, many of which are species of special management concern.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Permitting for livestock grazing use up to recognized active preference would continue until a change in resource conditions indicates that an adjustment is needed. Note that numbers of grazing allotments in each category (table 3-8) are subject to change as ecological range conditions change.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Any adjustments in livestock grazing use would be made as a result of monitoring and consultation with grazing permittees. Monitoring studies would be conducted using the current BLM-approved methodology.	Same as Preferred Alternative.	Livestock grazing use would be adjusted according to the range condition and potential up to the established preference use.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
LIVESTOCK GRAZING MANAGEMENT (continued) (public land surface only)	Monitoring would be continued following adjustments in grazing use to assure that grazing and other management objectives are being met.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Interdisciplinary rangeland monitoring studies would be conducted on an allotment category priority basis (I, M, and C) to detect changes in range condition and trend, and to determine if vegetation management objectives are being met for all resource uses (livestock grazing, watershed, riparian, and wildlife).	Monitoring studies would be established in "I" category allotments to monitor the effects of livestock grazing on the vegetation resource. Monitoring in other allotments may occur if determined to be necessary.	Monitoring studies would be established in allotments representative of ecological sites throughout the planning area.	Same as Preferred Alternative.
	Based on monitoring, the effectiveness of on-the-ground management toward meeting RMP and various resource activity plan objectives would be evaluated. Any rangeland studies would be carried out in accordance with approved standards and guidelines. Kind of livestock and seasons of livestock use may be modified to meet established interdisciplinary objectives or to prevent resource damage.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 2-1
Summary of Alternatives, Including the Preferred Alternative**

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
LIVESTOCK GRAZING MANAGEMENT (continued) (public land surface only)	Interdisciplinary monitoring studies would be established in riparian sites. The priority for establishing the studies would be "I," "M," and "C" category allotments. Studies in riparian areas in category "M" and "C" allotments would be established as workload allows or as a need is identified.	No riparian studies would be established.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Developed and semideveloped recreation sites would be closed to livestock grazing.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	In conjunction with the wildlife habitat management and water resources management programs, specific riparian management guidelines would be developed and implemented in all allotments, with priority given to category "I" grazing allotments. These guidelines could apply to such things as protective fencing, changes in livestock seasons of use, and project work to enhance and improve riparian zones.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
RECREATION RESOURCES MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Provide outdoor recreational opportunities on BLM-administered public land while providing for resource protection, visitor services, and the health and safety of public land visitors. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
RECREATION RESOURCES MANAGEMENT (continued) (public land surface only)	MANAGEMENT ACTIONS: The BLM-administered public land in the planning area would be available for recreation use subject to appropriate restrictions for the protection of other resource values.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Response to public requests, including dispersed recreation opportunities (hunting, rockhounding, and sightseeing), information, permitting of guide and outfitter activities on public land, limited field patrols of public land during hunting seasons, and boundary marking of areas where problems or conflicts occur would be provided.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Acquisition of lands with recreation potential would be pursued (map 3-13).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Access to BLM-administered public land surface in selected areas would be provided through purchase of access, exchange of use agreements, or exchange of lands (map 3-13) based on a willing buyer/seller agreement.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
RECREATION RESOURCES MANAGEMENT (continued) (public land surface only)	A recreation project plan, livestock water development, and wildlife habitat management plan would be completed for the development of the proposed Meadow Draw Reservoir recreation site (T. 45 N., R. 63 W., section 8). Development of additional recreation sites on public lands would be done as needs are identified.	Same as Preferred Alternative.	No recreation site would be developed.	Same as Preferred Alternative.
	Primitive camping sites would be established in Crook County (T. 56 N., R. 66 W., sections 5, 8, and T. 56 N., R. 67 W., section 1) to provide better control of camping use, fire, and trash collection. Additional sites would be established as they are identified if the need justifies development (map 3-13).	No campsites would be established.	No developed campsites would be provided. Camping would be allowed on any public lands not closed to camping.	Developed campsites would be provided with hard surface parking and camping areas, drinking water, trash, and sanitary facilities.
	Cutting trees and firewood for recreational purposes would be restricted to dead and down wood.	There would be no restrictions on firewood cutting.	No firewood cutting would be allowed.	Same as Preferred Alternative.
	Areas within ¼ mile of developed or semideveloped recreation sites on public land would be avoidance areas for development activities (such as roads, power lines, pipelines, well pads.) This requirement could be modified by the authorized officer. However, these areas would be open to development activities specifically for the purpose of recreation site facilities.	Same as Preferred Alternative.	Development activities would not be restricted near recreation developments. Such developments would be subject to design or color standards to be as compatible to the recreation site as possible.	Recreation site developments would not be allowed in areas having potential for utility development.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
RECREATION RESOURCES MANAGEMENT (continued) (public land surface only)	Camping would be allowed on developed recreation sites or on undeveloped BLM-administered public land surface for a period of not more than 14 days within 28 consecutive days. After this time the camp must be moved to a site at least 5 miles away.	Same as Preferred Alternative.	Same as Preferred Alternative.	A 14-, consecutive-day camping limit would be established at any location in the resource area open for camping with no further restrictions.
	The BLM would cooperate with other agencies and private landowners to explore opportunities to interpret a portion of the Cheyenne to Deadwood Trail.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Selected tracts of BLM-administered public land surface within T. 43-46 N., R. 60 W. would be designated as the Stateline SRMA to emphasize recreation-related opportunities. See the "Special Management Areas" section.	No SRMA designation would be pursued.	Same as Preferred Alternative.	Same as Preferred Alternative.
	BLM-administered lands in the remainder of the planning area (except for Whoopup Canyon ACEC) would be designated an extensive recreational management area (ERMA).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
Off-road Vehicle Management (public land surface only)	MANAGEMENT OBJECTIVE: Provide opportunities for ORV use in conformance with other resource management objectives. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 2-1
Summary of Alternatives, Including the Preferred Alternative**

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
RECREATION RESOURCES MANAGEMENT (continued) (public land surface only) Off-road Vehicle Management (continued) (public land surface only)	MANAGEMENT ACTIONS: ORV travel in the planning area would be limited to existing roads and trails. Seasonal restrictions for ORVs could be applied in crucial wildlife habitats (strutting grounds, nesting areas, spawning beds, crucial big game winter ranges, parturition areas) as needed. Over-the-snow vehicle travel would be required to follow the same prescriptions as for other vehicles.	No similar action.	Off-road vehicle use would be allowed on public lands with public access (175,000 acres of legal access; 110,000 acres of practical vehicle access). All other public lands would be limited to existing roads and trails.	Same as Preferred Alternative.
	Driving would be prohibited on wet soils and on slopes greater than 25% if unnecessary damage to vegetation, soils, or water quality would result.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	On areas designated as closed, or as limited to designated roads and trails, the off-road use of a vehicle on public lands would be prohibited unless the use were otherwise authorized by a permit or license. Signs would be posted and maps or brochures would be published to explain this requirement.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	No vehicle use would be allowed on the BLM-administered public lands within the Whoopup Canyon ACEC except for administrative purposes.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
SOILS MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Maintain soil cover and productivity and provide for improvement in areas where soil productivity may be below potential on BLM-administered public land surface. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Protecting and enhancing soil resources on public land surface would be accomplished through site-specific mitigation of individual surface-disturbing actions. Highly erosive or fragile soils would require mitigation measures such as special construction techniques.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Land uses and surface-disturbing activities on BLM-administered public land surface would be designed to promote reduction of channel erosion where it would result in severe losses of riparian habitat and reduction of accelerated surface erosion in areas having severe erosion problems or susceptibility. To the extent practical, damaged wetland and riparian areas would be restored.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
VEGETATION RESOURCES MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Maintain or improve the diversity of plant communities to support timber production, livestock needs, wildlife habitat, watershed protection, and acceptable visual resources; and reduce the spread of noxious weeds. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Protect and enhance the vegetation resources on BLM-administered public land surface through site-specific mitigation of surface-disturbing actions.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
Noxious Weeds (public land surface only)	Noxious weeds and other undesirable vegetation would be controlled in conjunction with counties, APHIS, and other agencies and affected interests, consistent with the <i>Wyoming Record of Decision for the Final EIS Addressing Vegetation Treatment on BLM Lands in the 13 Western States</i> (USDI, BLM 1991a).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
VEGETATION RESOURCES MANAGEMENT (continued) public land surface only) <i>Noxious Weeds</i> (continued) (public land surface only)	Control of noxious weeds, in priority order, may include species-specific insects, livestock grazing, mechanical methods, or chemical methods. If herbicides are proposed for use, those with minimum toxicity to wildlife and fish would be selected. As appropriate, buffer zones would be provided along streams, rivers, lakes and riparian areas, including riparian areas along ephemeral and intermittent streams.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<i>Special Status Plant Species</i> (public land interests only)	MANAGEMENT OBJECTIVE: Maintain or enhance essential and important habitats for special status plant species (for example, sensitive and threatened and endangered plants) on BLM-administered public land surface and prevent the need for any special status plant species from becoming listed as threatened and endangered.	No similar objective.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Sensitive species designation for species identified as being present or potentially present in the resource area would be requested (table 3-20).	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	A search for species would be required before allowing surface-disturbing activities in identified potential habitat locations.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
VEGETATION RESOURCES MANAGEMENT (continued) (public land surface only) <i>Special Status Plant Species</i> (continued) (public land surface only)	Threatened, endangered, and sensitive plant surveys and general floristic surveys would be conducted on BLM-administered public land surface to note locations and to obtain recommendations for management.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
VISUAL RESOURCES MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Maintain or improve scenic values, visual quality, and establish visual resource management priorities in conjunction with other resource values. (Also see appendix F.)	No designated VRM areas exist.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Visual resources would be managed in accordance with objectives for VRM classes that have been assigned to the planning area (see "Glossary"). Map 3-14 shows the VRM management areas.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	VRM requirements would be applied only to public lands or to BLM-approved mineral exploration and development activities on split-estate lands.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Visual resources would be considered before authorizing land uses that may affect them.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
VISUAL RESOURCES MANAGEMENT (continued) (public land surface only)	As appropriate, facilities or structures such as power lines, oil wells, and storage tanks would be screened, painted, and otherwise designed to blend with the surrounding landscape.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
WATERSHED AND WATER RESOURCES MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: Maintain or improve surface and groundwater quality consistent with existing and anticipated uses and applicable state and federal water quality standards; provide for availability of water to facilitate authorized uses, and to minimize harmful consequences of erosion and surface runoff from BLM-administered public land surface. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Protect and enhance the water resource through site-specific mitigation of individual actions.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	When herbicides are proposed for use, those with minimum toxicity to wildlife and fish would be selected. As needed, buffer zones would be provided along streams, rivers, lakes and riparian areas, including riparian areas along ephemeral and intermittent streams.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 2-1
Summary of Alternatives, Including the Preferred Alternative**

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
WATERSHED AND WATER RESOURCES MANAGEMENT (continued) (public land surface only)	Areas within 500 feet of 100-year floodplains, wetlands, or perennial streams, would be avoidance areas for surface-disturbing activities.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Areas within 100-year floodplains, wetlands, or riparian areas would be closed to placement or construction of structures (fuel or chemical storage tanks, well pads, buildings, or other types of structures), where there is potential for property, ecological, and general resource damage and human health and safety hazards from a flooding event.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Land use and surface-disturbing activities on BLM-administered public lands would be designed to promote reduction of channel erosion where it would result in severe reduction of riparian habitat, and to promote reduction of accelerated surface erosion in areas having severe erosion problems or susceptibility. To the extent practical, damaged wetland and riparian areas would be restored.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
WATERSHED AND WATER RESOURCES MANAGEMENT (continued) (public land surface only)	The protection of watershed resources would be considered in the analysis of BLM- and industry-initiated projects. As needed, watershed conservation practices and state of Wyoming Best Management Practices would be applied.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
WILDLIFE HABITAT MANAGEMENT (public land surface only)	MANAGEMENT OBJECTIVE: 1) Maintain biological diversity of plant and animal species; 2) support WGFD strategic plan population objective levels to the extent practical and to the extent consistent with BLM multiple use management requirements; 3) maintain, and where possible, improve forage production and quality of rangelands, fisheries, and wildlife habitat; and 4) to the extent possible, provide habitat for threatened and endangered and special status plant and animal species on all public lands in compliance with the Endangered Species Act (ESA) and approved recovery plans. (Also see appendix F.)	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
WILDLIFE HABITAT MANAGEMENT (continued) (public land surface only)	MANAGEMENT ACTIONS: BLM would coordinate efforts with other federal authorities and with state and local authorities to implement safe and effective prairie dog control measures on public lands when prairie dogs are determined to be a threat to human health and safety or are causing resource damage. Resource damage would be documented by BLM personnel from the resource area office when reported by the grazing lessee, adjacent landowners, or other interests. This could include resource damage occurring on private or state lands from prairie dog towns located on BLM-administered public lands. Animal damage control activities would be subject to established procedures and policies as outlined in the national and state level memoranda of understanding between BLM and APHIS and the Casper District animal damage control plan. Human health and safety determinations would be made by the state of Wyoming, Department of Health or by officers of the US Center for Disease Control.	Prairie dog control on public lands would be conducted when requested by a grazing lessee or adjacent landowner.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Control of the size of prairie dog towns on public lands would not occur unless resource damage were occurring or human health and safety were threatened as stated above.	Same as Preferred Alternative.	Prairie dog towns would not be allowed to exceed the size of the town as of October 1, 1992.	Size limitations of prairie dog towns on public lands would be determined on a case-by-case basis.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
WILDLIFE HABITAT MANAGEMENT (continued) (public land surface only)	New prairie dog towns would be allowed to become established on public lands.	Same as Preferred Alternative.	New towns would not be allowed to become established.	Same as Preferred Alternative.
	Unless one of the above situations were occurring, prairie dog control on BLM-administered public land in the resource area would not be allowed. Prairie dogs and their towns are an important component of the prairie ecosystem and are valuable in providing habitat and a food source for a number of wildlife species, many of which are species of special management concern.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	No BLM-authorized actions would be allowed that would disrupt animals on identified crucial winter range generally from November 1 to March 30 unless approved by the authorized officer (map 3-16).	Same as Preferred Alternative.	No BLM-authorized actions would be allowed that would disrupt animals on identified crucial winter range generally from November 1 to March 30.	Same as Preferred Alternative.
	To protect raptors and/or sage and sharp-tailed grouse during nesting season, disruptive activity would not be allowed generally from February 1 to July 31. This limitation does not apply to maintenance and operations of existing facilities. Modification of this limitation in any year may be approved in writing by the authorized officer.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 2-1
Summary of Alternatives, Including the Preferred Alternative**

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
WILDLIFE HABITAT MANAGEMENT (continued) (public land surface only)	Timber harvest on BLM-administered public land surface in crucial winter range would not be allowed unless the timber harvest is designed to improve winter habitat for wildlife species.	Timber harvest would be allowed in crucial winter range with actual harvest restricted from November 1 to March 30 unless approved by the area manager.	No restrictions would be placed on any timber harvests.	Same as Preferred Alternative.
	Riparian habitat management guidelines would be developed and implemented in all grazing allotments, with priority given to category "I" allotments. These guidelines could apply to such things as protective fencing, livestock season of use designations, and project work to enhance and improve riparian zones to achieve a healthy and productive condition in wetland/riparian areas, and to apply the "no net loss of wetlands" policy.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
WILDLIFE HABITAT MANAGEMENT (continued) (public land surface only)	Animal damage control activities would be considered on a case-by-case basis. These activities would be subject to established procedures and policies as outlined in the national and state level memoranda of understanding between BLM and APHIS and the Casper District animal damage control plan. Areas where proposed animal damage control activities (all or specific methods) are not compatible with BLM planning and management objectives or prescriptions for other resource activities and uses will be identified on a case-by-case basis, and APHIS/WS will be requested to amend or adjust proposed animal damage control activities accordingly. Human health and safety determinations would be made by the state of Wyoming, Department of Health or by officers of the US Center for Disease Control.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Fence construction would be required to meet current BLM fence standards. All fences on BLM-administered public land surface that cause documented wildlife conflicts would be removed, reconstructed, or modified, as appropriate or necessary, to eliminate or reduce the conflict.	Fence construction would be required to meet current BLM fence standards.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
WILDLIFE HABITAT MANAGEMENT (continued) (public land surface only)	Construction of fences that interfere with movements of big game species in crucial big game winter range would not be allowed.	Same as Preferred Alternative.	No restrictions would be placed on the location of fences in big game winter ranges.	Same as Preferred Alternative.
	Cooperate with the WGFD to provide adequate habitat for wildlife population objectives in the approved strategic plan for wildlife populations.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
SPECIAL MANAGEMENT AREAS (public land surface only) <i>Lance Creek Fossil Area</i>	No similar objective.	No similar objective.	No similar objective.	MANAGEMENT OBJECTIVE: Ensure continued public use and enjoyment of recreation activities while protecting and enhancing paleontological and cultural values; to improve opportunities for high quality outdoor recreation; and, to improve visitor services related to safety, information, interpretation, and facility development and maintenance.
	MANAGEMENT ACTIONS: There would be no ACEC designation for the BLM-administered public lands in the Lance Creek Fossil Area.	Same as Preferred Alternative.	Same as Preferred Alternative.	The BLM-administered public land surface would be designated as an ACEC to emphasize management of paleontological resources and to encourage future research of the paleontological record present in the area.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
SPECIAL MANAGEMENT AREAS (continued) (public land surface only) <i>Proposed Stateline Special Recreation Management Area</i>	MANAGEMENT OBJECTIVE: Ensure continued public use and enjoyment of recreation activities while protecting and enhancing natural and cultural values; improve opportunities for high quality outdoor recreation; and, improve visitor services related to safety, information, interpretation, and facility development and maintenance.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: Selected tracts of BLM-administered public land surface in T. 43-46 N., R. 60 W. would be designated the Stateline SRMA due to its high potential for recreational activities.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Recreational trails in the proposed SRMA would be developed on BLM-administered public land surface for use by hikers, skiers, and mountain bike riders. The trails also could be nature walk trails or used by schools, volksmarshes, and competitive and noncompetitive events for walking, horseback riding, mountain bike events, and cross-country skiing.	No recreation trail or other related developments would be developed on public lands.	Trails would be developed on public lands, but no other developments would occur.	Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
SPECIAL MANAGEMENT AREAS (continued) (public land surface only) <i>Whoopup Canyon ACEC</i>	MANAGEMENT OBJECTIVE: Protect and study rock art in the Whoopup Canyon area. Expand public education and interpretation in the area. Protect cultural resource values from degradation and provide for wildlife and scenic values, and Native American concerns.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	MANAGEMENT ACTIONS: The existing Whoopup Canyon ACEC designation (about 1,440 acres of BLM-administered public land) would be retained.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The public lands would be open to consideration for mineral leasing with a no surface occupancy stipulation (see Glossary).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 2-1
Summary of Alternatives, Including the Preferred Alternative**

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
SPECIAL MANAGEMENT AREAS (continued) (public land surface only) <i>Whoopup Canyon ACEC (continued)</i>	The public lands would be closed to: -- public access and general public use.	No similar action.	Same as Preferred Alternative.	Access for public use and enjoyment would be pursued. Day use facilities such as parking, trash receptacles, trail markers, and picnic facilities would be provided.
	-- surface-disturbing activities including rights-of-way actions. The only exception to this would be those surface-disturbing activities necessary for meeting the research, education, interpretive and preservation management objectives for the area.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	-- mineral material sales	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	-- mineral location (a withdrawal would be pursued)	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	-- motorized or nonmotorized vehicle travel. Vehicle use for administrative purposes would be allowed on a case-by-case basis.	Off-road vehicle travel would be limited to existing roads and trails.	Same as Preferred Alternative.	Same as Preferred Alternative.
	-- the use of explosives or blasting -- use of fire retardant chemicals or those retardants containing dyes to prevent adverse effects to the petroglyphs and to protect the integrity of sociocultural values	No similar action. No similar action.	Same as Preferred Alternative. Same as Preferred Alternative.	Same as Preferred Alternative. Same as Preferred Alternative.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
SPECIAL MANAGEMENT AREAS (continued) (public land surface only)	-- geophysical exploration activity -- commercial timber harvesting and sale of other forest products	No similar action. No similar action.	Same as Preferred Alternative. Same as Preferred Alternative.	Same as Preferred Alternative. Same as Preferred Alternative.
<i>Whoopup Canyon ACEC</i> (continued)	The public lands would be managed consistent with the Class II visual resource management classification.	No similar action.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The requirements identified above for no surface occupancy stipulations on oil and gas leases, surface-disturbing activities, mineral material sales, mineral location, the use of explosives or blasting, and geophysical exploration would be applied to split-estate lands (private surface over federal minerals), in relation to federal mineral exploration and development activities only.	No similar action.	Same as Alternative A.	Same as Preferred Alternative.
	Livestock grazing objectives would be evaluated and, as needed, modified to be consistent with the management objectives for this area.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Legal access across private lands for administrative and management purposes would be pursued.	No similar action.	Same as Alternative A.	Access for public use and enjoyment would be pursued. Day use facilities such as parking, trash receptacles, trail markers, and picnic facilities would be provided.

Table 2-1
Summary of Alternatives, Including the Preferred Alternative

Land Use or Resource	Preferred Alternative	No Action Alternative Alternative A	Alternative B	Alternative C
SPECIAL MANAGEMENT AREAS (continued) (public land surface only)	Visitation to and use of the area would be limited to (1) research under a cultural resources research permit; (2) traditional religious use by Native Americans; and, (3) supervised, guided tours by the BLM.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<i>Whoopup Canyon</i> ACEC (continued)	Active research and preservation activities would be conducted. Petroglyphs, artifacts, and cultural deposits would be preserved and protected from weathering and vandalism.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	A land exchange to acquire private lands in the area determined to have significant cultural resource values would be pursued.	Same as Preferred Alternative.	No attempt would be made to acquire private lands.	Same as Preferred Alternative.

CHAPTER 3

THE AFFECTED ENVIRONMENT

AIR QUALITY

Air quality in the NRA is generally excellent with measured background concentrations of all criteria pollutants well below the established standards. Criteria pollutant concentrations are measured by the State of Wyoming, DEQ. The criteria pollutants, the applicable NAAQS, the WAAQS, and the background concentra-

tions are given in table 3-1. Other air quality related values such as acid deposition are monitored by the BLM near Newcastle. This site is part of the National Atmospheric Deposition Program/National Trends Network. Figure 3-1 shows seasonal sulfate and nitrate deposition at this site. Deposition rates of 10 kilograms per hectare per year (kg/ha/yr) for sulfate and 15 kg/ha/yr for nitrate are considered potentially damaging to vegetation. Visibility is not measured in this area.

TABLE 3-1
CRITERIA AIR POLLUTANT STANDARDS AND
BACKGROUND CONCENTRATIONS FOR THE NEWCASTLE RESOURCE AREA
(These standards are not to be exceeded more than once per year.)

Pollutant	Averaging Period	Wyoming Standard (mg/m ³)	National Standard (mg/m ³)	Background Concentration (mg/m ³)
Total suspended particulates (TSP)	24-hour	150	—	62.5
Particulate matter less than 10 micrometers in diameter (PM-10)	24-hour	150	150	10
	annual	50	50	—
Nitrogen dioxide (NO ₂)	annual	100	100	2
Ozone (O ₃)	1-hour	160	235	—
Sulfur dioxide (SO ₂)	3-hour	1,300	—	—
	24-hour	260	365	9
	annual	60	80	1
Carbon monoxide (CO)	1-hour	40,000	40,000	3,500
	8-hour	10,000	10,000	1,500

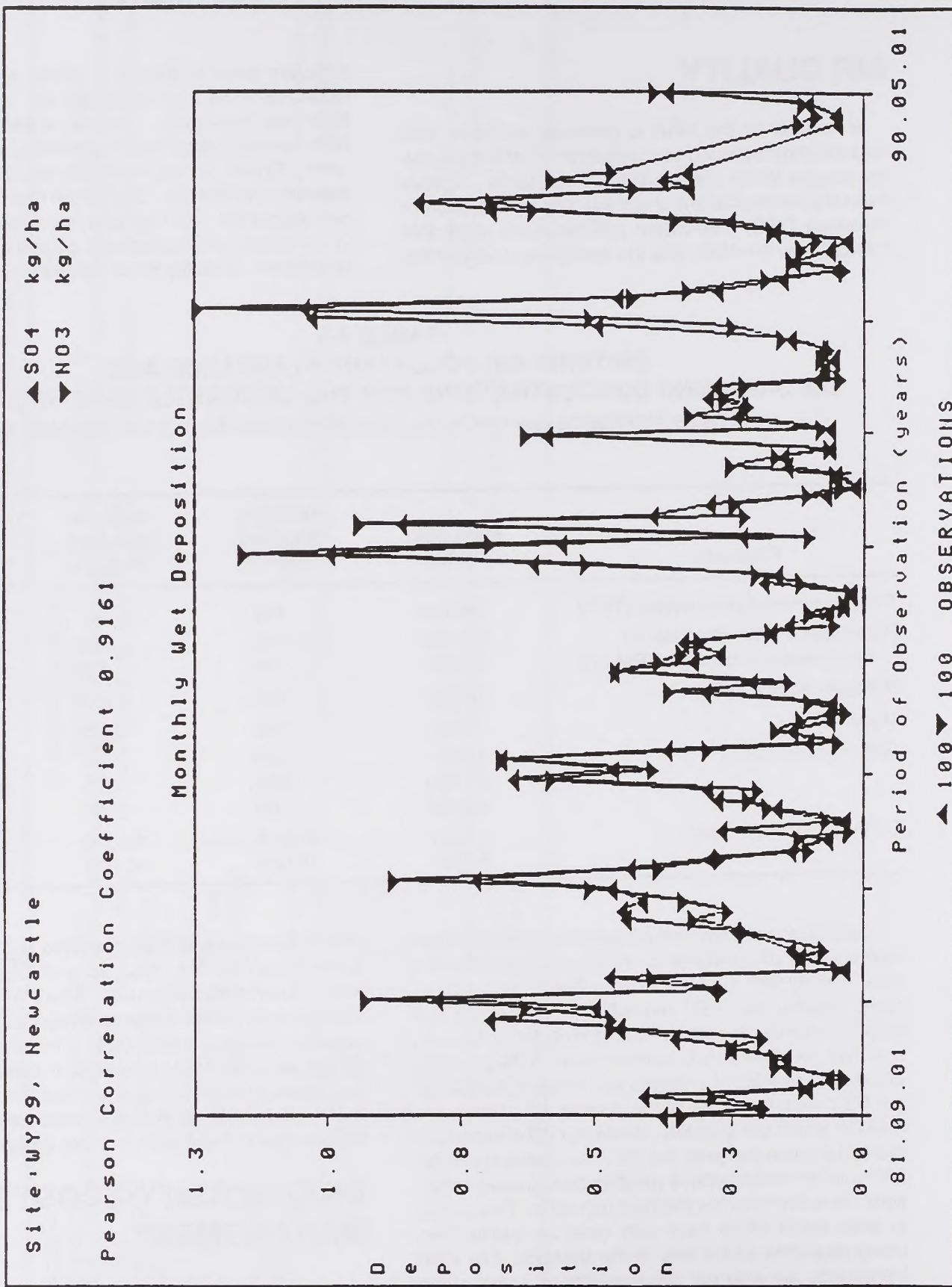
In addition to the ambient air quality standards, major new sources of pollutants or modifications to sources must comply with the New Source Performance Standards (NSPS) and PSD regulations. The NSPS are emission standards based on the type of plant to be built, and thus not amenable to consideration in the planning process. The PSD regulations are ambient standards; the PSD increments are given in table 3-2. Unlike the NAAQS which are absolute values not to be exceeded more than once per year, the PSD standards are increments or increases above existing background conditions, no matter how low this background is. This serves to keep areas which have very good air quality from being degraded all the way to the NAAQS. The PSD increments are also not the same for all areas of the country. Each location is designated either PSD Class I, II, or III. Class I areas have the smallest increments

and were originally designated in the 1977 amendments to the Clean Air Act. Examples of Class I areas are national parks and wilderness areas larger than 5,000 acres and any other areas so designated by the states or Indian tribes at a later date. The rest of the United States were designated as Class II. Class III requires a redesignation from Class II and has the highest increments. Currently, all BLM-administered public lands in the Newcastle Resource Area are designated Class II.

BIODIVERSITY/ECOSYSTEM MANAGEMENT

There is growing recognition, globally, that a new approach to natural resource management is needed which assures that change will sustain the integrity,

FIGURE 3-1
SEASONAL SULFATE AND NITRATE DEPOSITION



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TABLE 3-2
AIR POLLUTION INCREMENTS
FOR PREVENTION OF SIGNIFICANT DETERIORATION

Pollutant	Averaging Period	Class I	Class II	Class III
Total suspended particulates (TSP)	annual geometric	5	19	37
	24-hour	10	37	75
Sulfur dioxide (SO ₂)	annual arithmetic	2	20	40
	24-hour	5	91	182
	3-hour	25	512	700
Nitrogen dioxide (NO ₂)	annual arithmetic	2.5	25	50

diversity, and productivity of entire ecological systems while continuing to provide resource products, uses, values, and services for present and future needs.

Ecosystem management is a process that considers the total environment of an area. It uses ecological, economical, social, and managerial principles to produce, restore, or sustain the integrity and diverse conditions of an ecosystem, and its uses, products, values, and services over the long term. Management of individual components of ecosystems for their immediate needs is expanded to management centered on long-term goals and objectives targeted to the entire ecosystem which may cross jurisdictional lines.

Ecosystems such as grasslands, forests, and aquatic systems contain a variety of species adapted to the components in which they exist and functioning in conjunction with each other. The loss or reduction of species within these ecosystems can have far-reaching effects on all other species present. The full significance of the changes created by altering the balance of these ecosystems is often not immediately apparent and the impacts subtle and difficult to predict.

Future studies must be conducted to determine boundaries of ecoregions and ecosystems that involve part or all of the planning area to determine goals and objectives for managing ecoregions and ecosystems. Results of these studies will be used to determine various management actions that may be undertaken on the BLM-administered public lands to help achieve those objectives. Examples of possible ecosystems in the planning area are the Black Hills, the Little Missouri Breaks, and the shortgrass prairie.

Biological diversity, or biodiversity, is a recurring theme throughout resource management programs presented in this Draft EIS. The U. S. Congress, Office of Technology Assessment (1987) has defined biodiversity as "the variety and variability among living organisms

and the ecological complexes in which they occur. Diversity can be defined as the number of different items and their relative frequency. Thus the term encompasses different ecosystems, species, genes and their relative abundance."

The BLM Science Advisory Group has adopted a definition of biodiversity for use by the BLM which states that "biodiversity is the aggregate of species assemblages (communities), individual species and genetic variation within species, and the processes by which these components interact within and among themselves; for purposes of classification, biodiversity can be divided into three levels: (1) community diversity (habitat, ecosystem), (2) species diversity, and (3) genetic diversity within species; all three levels change through time" (Cooperrider 1990).

The value of maintaining biodiversity of plant and animal species has long been recognized as a necessary and desirable goal for resource management. In all alternatives presented, an effort was made to provide for consideration of biodiversity and for reasonable resource development opportunities, while still providing adequate resource and environmental protection.

Past management actions have, in some localized areas such as riparian areas, reduced the number of specific types of species present from the original or potential condition that may exist. While an increase in individual species may be beneficial to one group or industry, the overall reduction in species and communities is a negative effect on the ecosystem as a whole, which could lead to undesirable situations that can be costly and difficult to remedy.

Conserving biological diversity includes more than recovery of endangered species or creation of preserves. It encompasses maintaining the ecological processes and preserving the capability of genes, organisms, and communities to evolve over time.

AFFECTED ENVIRONMENT

The continuation of availability of natural resource products such as livestock forage, wildlife habitat, wood products, recreation areas, and water production and quality control will depend largely on the management of an area to preserve its biological diversity.

Biodiversity will be a management goal of all programs the BLM administers in the NRA. This will be most evident in the management actions of the range, riparian, forestry, and wildlife habitat management, predator control, weed control, and rodent control programs and in the impacts of all commodity producing programs.

CLIMATE

The climate of the NRA is generally dry continental temperate. Most days in the area are dry and sunny with weather fronts coming from the Pacific Ocean. The resource area does vary in its climatic setting as influenced by elevation. Higher elevations experience lower average temperatures and higher average precipitation. Thus, the lowest area in the Belle Fourche valley supports steppe/grassland ecosystems. Most of the area is semiarid steppe, while the mountains in the northeast are more lush montane and alpine ecosystems.

Precipitation and temperature are the two most important climatic parameters relating to vegetation growth in the NRA. The locations of stations where climate measurements are made in the resource area can be found in the management situation analysis (MSA) which is on file in the Newcastle Resource Area office. The average annual precipitation for the area is from 22.78 inches in the Black Hills at Alva to 10.59 inches at Keeline. About 19% of the precipitation generally occurs from November through March as snow and about 57% from April through July as rain. Temperatures can be extreme in both winter and summer. The lowest recorded temperature was -30°F and the highest was 105°F, though the average annual temperature is a rather cool 46°F. Figure 3-2 shows the annual distribution of precipitation and temperature at the Newcastle station.

Other climatic factors which affect the ecological setting of the NRA are humidity, evaporation, and growing season length. Relative humidity over this area can be very low and averages about 65% throughout the year. Pan evaporation is an indication of the amount of moisture that can be lost by water bodies, soil, and vegetation due to atmospheric conditions. The estimated annual pan evaporation for this area is 60 to 65 inches of water. The growing season in this area is short making grain production limited and most other agricultural activities inappropriate, though the grasslands have helped to foster the grazing industry. The frost-free period is a maximum of about 137 days (the longest in

the state) and decreases with the increasing elevation to as low as 100 days. Winter in this part of the state is not as long and harsh as elsewhere, although severe snowstorms occur between once and twice a year, particularly in the higher elevations. Days with summer thunderstorms are more common along the eastern edge of the state, including the NRA, averaging over 50 days per year.

Wind observations are not taken in the NRA. The nearest such stations in similar parts of the state are at Casper and Cheyenne. It is expected that like most of the state, winds are predominantly from the west to southwest, depending on the influence of local terrain, and can be quite strong. More information on wind speeds and directions can be found in the MSA on file at the Newcastle Resource Area office.

CULTURAL RESOURCES

Description and Summary

Cultural resources in the area span at least 12,000 years of prehistory, a short protohistoric period of about 200 years, and an even briefer historic period. Remains from all periods are found throughout the Newcastle Resource Area.

Through December 1989, approximately 500 historic sites have been recorded in the planning area. Because a Class I overview of historic period resources has never been conducted in the Newcastle Resource Area, we do not know how many sites of various kinds are recorded and how many are significant.

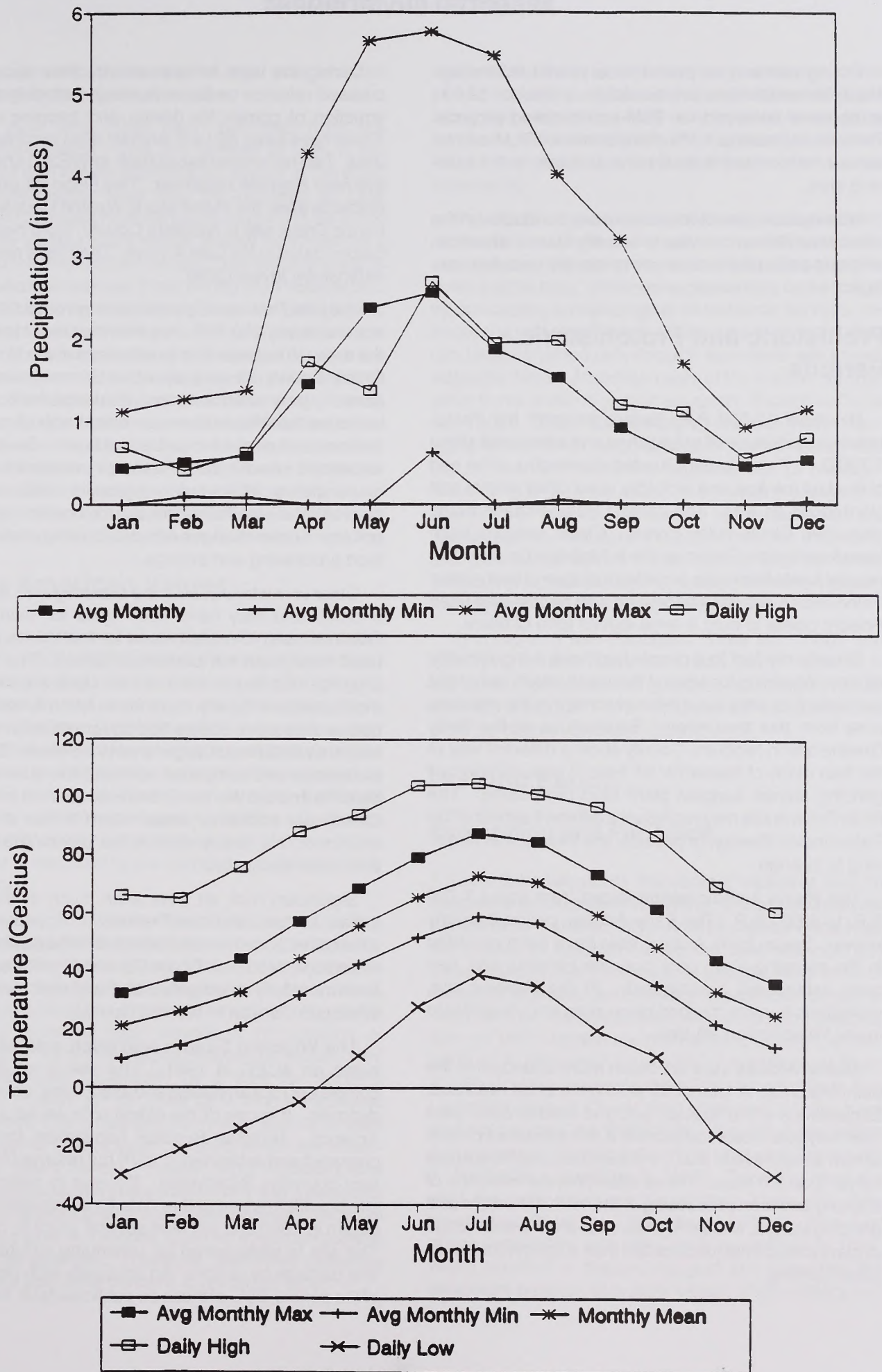
A total of 1,656 prehistoric sites were on record for the planning area at the end of 1989. A Class I overview synthesizing these data is available in the Newcastle Resource Area office. The kinds of prehistoric sites known to occur in the planning area include occupations and campsites, tipi rings, quarries, lithic workshops, rock art, kill and processing sites, rockshelters, hunting camps, overlooks, vegetable processing camps, and burials.

Of the 1,656 prehistoric sites in the area, 866 (52%) lack evaluations, 230 (14%) are designated as eligible for the National Register of Historic Places, and 560 (34%) are considered not eligible. The evaluations for many of these sites are based on inadequate data and may not be reliable.

No prehistoric or historic sites on BLM-administered surface in the planning area are listed on the National Register of Historic Places. Two sites have been nominated to the National Register, but the nominations were returned by the Keeper of the Register because inventory data were inadequate.

FIGURE 3-2

ANNUAL DISTRIBUTION OF PRECIPITATION AND TEMPERATURE



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During a seven-year period (fiscal years 1983 through 1989) for which data are available, a total of 32,541 acres were surveyed for BLM-administered projects. This area represents 1.5% of the combined BLM-administered surface and federal mineral estate in the planning area.

No extensive inventories have been conducted in the Newcastle Resource Area to identify Native American religious and cultural sites nor to identify possible conflicts.

Prehistoric and Protohistoric Periods

By about 12,000 B.P. (before present) the Paleo-Indian period was well established and lasted until about 7,700 B.P. Paleo-Indians hunted mammoths at the end of the last Ice Age and probably used other animal and plant foods as well. The earliest Paleo-Indians made distinctive Clovis fluted points. Clovis remains have been found at the Sheaman site in Niobrara County. The nearby Agate Basin site provides a picture of successive Paleo-Indian activities beginning with people who used Folsom points to hunt a large extinct form of bison.

Despite the fact that people had been living in north-eastern Wyoming for several thousand years, only eight archeological sites have been recorded in the planning area from this time span. Excavations at the Betty Greene site in Niobrara County show a different way of life than many of the earlier kill sites. Large numbers of grinding stones suggest plant food processing. The Betty Greene site may represent a different aspect of the Paleo-Indian lifeway, or possibly the lifeway was beginning to change.

The Plains Archaic period lasted from about 7,700 B.P. to 2,000 B.P. The Early Archaic period is poorly known. Seven Early Archaic sites have been recorded in the planning area; only one, the Hawken site, has been extensively investigated. At the Hawken site, prehistoric hunters trapped bison in an arroyo similar to many Paleo-Indian kill sites.

Middle Archaic sites are much more abundant in the planning area. A total of 31 sites have been recorded. Excavations at the McKean site and several other sites near Keyhole Reservoir provide a more detailed picture of how people lived. Most of these sites are living areas rather than kill sites. These sites provide evidence of cooking and food processing in the form of hearths and grinding stones. Middle Archaic sites show a wide range of plant and animal foods rather than a concentration on bison hunting.

During the Late Archaic, nearby sites show an increased reliance on bison hunting, including the construction of corrals for driving and trapping animals. There have been 69 Late Archaic sites recorded in the area. Two have been excavated: 48WE320 and a small site near Keyhole Reservoir. Two bison kill sites in the resource area, the Fulton site in Weston County and the Lance Creek site in Niobrara County, have been radio-carbon dated to the Late Archaic. They have never been extensively investigated.

The Late Prehistoric period, lasting from 2,000 B.P. to approximately 250 B.P., has the most recorded sites in the area—81. Extensive excavations at the Vore site in Crook County show a series of 25 communal bison drives into a sinkhole trap. Evidence from the trap indicates that bison drives correlated with climatic fluctuations and peaks in numbers of bison. Several sites excavated near Keyhole Reservoir provide information on campsites. Major technological innovations associated with the Late Prehistoric are the bow and arrow and pottery. These changes affected hunting methods and food processing and storage.

Other prehistoric sites in the planning area are as yet undated and may have been used for many years. Quarries used to extract stone for tools were probably used throughout the prehistoric period. The Spanish Diggings quarries in the Hartville Uplift are one of the most extensive quarry locations in North America. The quarry area alone covers 360 square miles in the planning area and a much larger area to the south. Extensive workshops and campsites surround the quarries. The Manville and Old Woman Creek Hills quarries in Niobrara County are additional areas where similar stone was extracted. No quarry sites in the planning area have ever been excavated.

Significant rock art sites span much of the Paleo-Indian, Archaic, and Late Prehistoric. Fourteen rock art sites have been minimally recorded in the planning area. In addition, Medicine Creek Cave in Crook County has been more fully investigated, and fieldwork is ongoing at Whoopup Canyon in Weston County.

The Whoopup Canyon petroglyph area was designated an ACEC in 1981. The site is an extensive complex of rock art panels and associated archeological deposits. It is one of the oldest rock art sites in North America. National Register nomination forms were prepared and submitted in 1976 but returned for necessary boundary information. Surveys to determine the site boundaries and gather data for a management plan began in 1990 and will take several years to complete. The site is endangered by continuing natural erosion and damage by visitors. An unusually high percentage of the panels, 98% of those on public surface, have been

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damaged by visitors. There is no legal access to the public lands within the site complex.

Only nine sites have been recorded from the Protohistoric period. This low number of sites is not consistent with known protohistoric activity in the area. Some Protohistoric sites may be identified as Late Prehistoric because no trade goods happen to be found on the site surface and a similar lifeway continued for a while into the Protohistoric period. One site classified as Late Prehistoric was used last during the Protohistoric. The Vore site is recorded on a Cheyenne pictographic calendar. The Bush-Bunger antelope trap is another significant protohistoric site. The V-shaped wings of the trap, which were made of juniper, are still partially intact. Several other sites have sacred and cultural significance to contemporary Native Americans. While the entire Black Hills are important to Native Americans, a number of prominences are special. Devils Tower, Sundance Mountain, Little Sundance (Green) Mountain, Inyan Kara, the vicinity of the Rawhide Buttes, and Whoopup Canyon are known sacred places in the planning area.

Native American Values

While concerns may be voiced by the general public during the public scoping period, the unique legal status of American Indians, the sovereignty of tribal governments, and the nature of reserved tribal rights merits separate attention. The Newcastle Resource Area may contain sites and locales which some of today's Indian tribes could find significant because of an association with tribal history or because of a site's traditional religious or cultural importance to the tribe. Such sites are generally deeply rooted in the tribe's history and are important in maintaining the continuing cultural identity of the tribe.

These sites and locales may be merely natural features such as specific springs or unusual geologic formations which are sacred to a tribe. They may also be observable man-made features such as rock cairns, stone circles, medicine wheels, or other rock alignments generally found on high places, or pictographs or petroglyphs. All of these types of sites and locales may have been used historically by a tribe for religious purposes or may still be used by a tribe's traditional practitioners. There may also be trails or specific locales where historic events have occurred which are important to a tribe's history. Finally, tribal members and traditional practitioners may traditionally use a particular locale for gathering and collecting materials, such as medicinal plants or minerals, used for important cultural or religious activities. Therefore, traditional gathering areas may also be of concern to an Indian tribe.

Physical affects on a cultural or historical resource should not be the only consideration. Because sites and locales significant to a tribe may be used for religious purposes, which usually require prayer and meditation, affects from auditory and visual impacts must also be considered.

Procedures for identifying sites and locales of concern to Native Americans requires consultation with the appropriate tribal government or with traditional practitioners of the tribe. While some places may come to light by conducting archaeological or historical surveys, the existence and significance of locations of concern often can be ascertained only through interviews with knowledgeable Native American users of the area, or through other forms of ethnographic research. Executive Order No. 13007, "Indian Sacred Sites," requires that in managing federal lands, each executive branch agency with statutory or administrative responsibility for management of federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites.

In complying with Executive Order No. 13007 and identifying all other Native American concerns, the BLM will follow procedures and guidance established in BLM Manual Handbook H-8160-1, "General Procedural Guidance for Native American Consultation."

Historic Period

Exploration and Fur Trade

Little is known about the earliest explorers and fur trappers in northeastern Wyoming. The area was on the fringes of fur trade activity. In 1811, Wilson Price Hunt led a party of Astorians along the Little Missouri and Belle Fourche rivers en route to Oregon (map 3-1). A series of scientific and military expeditions began in 1853 with Dr. Ferdinand Hayden's geological exploration. In 1857 Hayden returned accompanying Lieutenant G. D. K. Warren on an expedition to explore and map the Black Hills. Warren's expedition traveled from Fort Laramie to Beaver Creek, then continued to Inyan Kara and east across the Black Hills. A second expedition that gathered scientific data on the area was Captain W. F. Reynolds' expedition in 1859. Traveling from the east, the party traversed the northern Black Hills, then traveled north up the Little Missouri River. The next major exploration was the Custer expedition in 1874, which resulted in discovering gold and disrupting the temporary balance of Indians versus white settlers that

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was established by the treaty of 1868. To verify the gold discoveries and ascertain their extent, geologist W. P. Jenney traveled north from Cheyenne in 1875 to a trading post on Beaver Creek, which was renamed Jenney Stockade. Jenney continued up Beaver Creek and followed Custer's trail east into the Black Hills.

These early explorations left few traces in the archeological record.

Trails and Transportation

As soon as the Black Hills were opened for mining in 1876, the Cheyenne to Black Hills Stage Line was initiated (map 3-1). During the first year, the stages traveled north of Lusk to Hat Creek Station, then veered northeast to the southern Black Hills. This line was soon abandoned and a route up the west side of the Black Hills was established. Called the Black Hills Wagon Road or the Cheyenne to Deadwood Stage Road, this route was used from 1877 to 1887. In northeastern Weston County two branches were used. One extended directly northeast across the mountains; the other skirted the edge of the Black Hills to Sundance and continued east along the Red Valley. The stage route was used long enough to leave traces in areas where subsequent roads have not obliterated them. Although only the Hat Creek stage station still has a standing structure, archeological remains can be expected at all of the stations. The Jenny Stockade building is also intact, but it was moved to Newcastle.

From 1868 to 1897 cattlemen used the Texas Trail to move cattle from Texas to Montana. The trail extended south to north across the planning area. Because the cattle spread out and used various routes, it is difficult to find well-defined traces of the main route or secondary trails.

The first railroad that entered northeastern Wyoming was a line of the Burlington and Missouri River Railroad. The line was extended to Newcastle from Grand Island, Nebraska, in 1889, only after sufficient coal was discovered at Cambria to run the steam engines. By 1891, the rail line reached Moorcroft and continued west across the Powder River Basin. Rail service to Aladdin was also associated with coal mining. A narrow gauge spur line connected Aladdin to the Chicago and Northwestern Railway at Belle Fourche, South Dakota.

Mining and Industry

The initial impetus for historic settlement of the planning area was the Black Hills gold rush. Only three early mining districts were in the planning area. The districts

were remote from the main transportation routes and therefore were not fully developed. Placer mining began on Sand Creek in 1875, the first year of the gold rush, followed by quartz vein mining on Mineral Hill. Mineral Hill was across the border from the Tinton mining area in South Dakota. The Black Butte District southeast of Sundance, prospected in 1879, produced some gold and silver, while the Bear Lodge District, centered around Warren Peak, produced copper and gold.

The first oil discoveries in the planning area were oil springs near Newcastle. As early as 1878, oil was skimmed off settling ponds and hauled to the Deadwood-Lead area for lubricating mining equipment. Oil seeps near Moorcroft were discovered around 1884. The demand from mining towns was sufficient that 60 wells had been drilled by 1887. Moorcroft became the first developed oil field in the Powder River Basin and sold oil to the mines for \$28.00 a barrel. The Rockyford Field in Crook County began producing oil in 1909. The Thornton and Lance Creek fields were started in 1915 and 1918, and the following year the Mule Creek, Osage, and Wakeman Flats fields were operating. Pedro, Ant Hills, and Dewey Dome were all post-World War I developments. Several of the fields are historically important and may contain features eligible for the National Register of Historic Places.

Coal was discovered at Aladdin between 1875 and 1880 and was mined by early settlers for domestic use. Peak production was between 1898 and 1909 when the coal was used to fuel locomotives. Coal at Cambria near Newcastle had been reported in the late 1870s or early 1880s and was first prospected in 1886 to determine whether it was sufficient to fuel the railroad. The first coal shipment in 1889 enabled the railroad to reach Newcastle that year. The Cambria mines operated from 1889 until 1928 and produced coke for gold smelters in Deadwood in addition to fuel for locomotives and domestic use.

Around the edge of the Black Hills from Newcastle to Aladdin, small wagon mines provided coal for local ranchers and settlers around the turn of the century.

Bentonite was also discovered prior to 1900. In 1897 a pit near Newcastle shipped raw clay. Mining in the extensive Clay Spur District began before 1903. Processing plants were first constructed in the 1920s. Uranium was first discovered in Wyoming in 1918 and was associated with copper and silver ore at the Silver Cliff Mine near Lusk.

Other early industrial activity, such as salt extraction and logging, supported mining and settlements as early as the 1870s.

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Ranching and Homesteading

As soon as the treaty of 1876 opened up the area to Anglo-American settlement, commercial buffalo hunters swarmed over the Powder River Basin and killed most of the buffalo by the fall of 1878. Cattlemen then began moving herds into the area. A number of large ranches were established in all three counties in 1878. The large ranches were in open country along major streams, including the Little Missouri River, Belle Fourche River, Cheyenne River, Lance Creek, Old Woman Creek, and Beaver Creek. Smaller ranchers and settlers moved to the streams along the edge of the Black Hills.

Homesteads are the most frequent kinds of historic sites found in the planning area.

FOREST RESOURCES

An inventory of the forested land was completed in 1980. From analysis of this inventory, 8% of resource area (25,300 acres) is classified as forestlands. Within the forestlands, 62% (15,800 acres) is classified as commercial, and the remaining 38% (8,693 acres) is classified as nonproductive. On the commercial forestlands, the seedlings/saplings class accounts for 2% (374 acres), the pole class accounts for 29% (4,686 acres), while the remaining 69% (10,747 acres) is sawtimber. Commercial forestlands are defined as being capable of producing at least 20 cubic feet of growth per acre per year of a tree species suitable for commercial wood products. Noncommercial forestland is land that has less than 20 cubic feet of growth per acre per year or is capable of growing only noncommercial tree species. Appendix G provides additional information about the forest resources in the planning area.

Forested public lands are concentrated along the Wyoming/South Dakota state line in Weston and Crook counties. Small, isolated, scattered tracts of public forestlands intermixed with private land are along the west and northwestern portion of the Black Hills in Crook County. In the Hat Creek Breaks and the German Hills areas in Niobrara County there are also small tracts of forested public lands.

Ponderosa pine (*Pinus ponderosa*) is the predominant commercial sawtimber species found in the resource area. Noncommercial species which may be found in association with the ponderosa pine are Rocky Mountain juniper, paper birch, bur oak, plains cottonwood, and quaking aspen.

The 25,300 acres of forestland are classified to one of four forest management categories:

Lands available for intensive management of forest products are areas where forest management is the primary use and where other resource uses or values occur but are not emphasized (0 acres).

Lands available for restricted management of forest products are areas where multiple use or other resource values are emphasized, but timber harvest occurs (15,800 acres).

Lands where the forest management is for the enhancement of other uses are areas where forest management activities are specifically for the benefit of other identified resource uses or values (9,083 acres).

Forestlands not available for management of forest products are areas where no forest management is planned (417 acres).

During the past decade, about 1,600 acres (10%) of the commercial forest acres have been harvested using a two- or three-cut shelterwood harvest, commercial, and precommercial thinning. This is the accepted silvicultural practice in harvesting ponderosa pine. The harvest of trees is done with rubber-tired skidders or whole tree mechanical harvesters.

In the mid-1980s when funding became available, timber stand improvement and precommercial thinning began to treat the backlog of overstocked stands which were identified as needing treatment. At this time, some 1,200 acres have had some type of treatment. A maintenance level of about 60 acres is being treated annually. This level varies year to year with available funding.

The major wood product users in the NRA are the sawmills located in Newcastle, Hulett, and Spearfish, South Dakota. These mills receive most of their supply of timber from the Black Hills National Forest with the remaining supply coming from private, state, and BLM-administered public lands.

Minor forest products (fuelwood, post and poles, and Christmas trees) are sold on a public demand basis. The demand for these forest products in the past has been small to nonexistent and has been met by the Forest Service (FS) or private landowners.

GEOLOGY AND MINERAL RESOURCES

Geology

The NRA lies within the Great Plains geomorphic province and encompasses portions of three geological

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provinces: the Black Hills uplift, the Powder River Basin, and the Hartville uplift (map 3-2).

The Black Hills are a broad northward-trending anticlinal uplift about 200 miles long flanked by the Powder River Basin to the west and southwest and the Williston Basin to the northeast (map 3-2; Robinson, Mapel, and Bergendahl 1964). The overall structure of this domal uplift is that of a broad anticline/nose whose axis plunges at a low angle northward. The dip on the east side of this nose is gentle and northeastward; on the west side it is gentle and northwestward (Knechtel and Patterson 1962).

The Black Hills were formed by the erosion of this dome-shaped uplift during Laramide time and consist of a Precambrian core flanked by younger Paleozoic and Mesozoic sedimentary rocks. The successive geologic formations generally crop out in parallel arcuate belts that are convex toward the north and extend eastward across the district. The oldest rocks are exposed in the south-central part; the youngest are along the northeast and northwest margins. This general pattern is interrupted locally by anticlinal and synclinal flexures, the axis of which tends to parallel the arcuate belts, and by many small normal faults.

The Black Hills uplift is separated from the Powder River Basin by the Black Hills monocline, a steep westward-dipping flexure which trends northwest across Weston and Crook counties, becoming a fault at its deepest point (map 3-2). It serves essentially as a boundary between gently dipping rocks of the Black Hills uplift and adjoining gently dipping rocks of the Powder River Basin. Sedimentary rocks of primarily Cretaceous age on the eastern or uplifted side of the Black Hills monocline are deformed by northward or northwestward-trending anticlines and synclines and by nearly circular domes (Robinson, Mapel, and Bergendahl 1964). These anticlinal structures are found throughout Crook County. Those present along the western and northern boundaries have produced economic quantities of oil and gas (USDI, BLM 1981c).

The Powder River Basin to the west of the Black Hills monocline is a deep, asymmetric, mildly deformed, synclinal basin. It encompasses most of the northeastern corner of Wyoming and a small portion of southeastern Montana (map 3-2). Steeply dipping to overturned strata form hogbacks flanking the western margin of the basin, while on the eastern margin the strata are relatively undisturbed and dip gently westward off the Black Hills uplift (Strickland 1958). More than 13,000 feet of Phanerozoic sediments overlie the Precambrian basement in the Powder River Basin (Ayers 1986).

The general configuration of the Powder River Basin developed in Early Permian time with local structures forming soon afterward. However, the present structure

of the basin is the result of the late Cretaceous to early Tertiary Laramide Orogeny. Laramide deformation produced strong regional asymmetry, with the major part of the basin dipping southwest at about two degrees (Berg and Tenney 1967). The basin is bounded by zones of stronger deformation along the margins of the Black Hills and Hartville uplifts and the Big Horn Mountains. In these structural belts, gentle to sharp anticlinal closures were formed, probably along lines of structural weakness that were present at a much earlier date (Berg and Tenney 1967).

The Hartville Hills area is a broad northeast-trending uplift 15 to 23 miles wide and 35 to 40 miles long extending from Guernsey on the southwest to Manville and Lusk on the north and northwest (map 3-2; Condra, Reed, and Scherer 1950). It was formed by the erosion of uplifted Precambrian and Paleozoic age rocks, forming deep canyons and valleys containing late Tertiary deposits, remnants of an older upland surface. The upturned edges of the sedimentary strata surrounding the Hartville Hills form asymmetrical foothill ridges with inward-facing slopes.

Rawhide Butte, the northern extension of the Hartville Hills in southwestern Niobrara County, rises abruptly more than 1,000 feet above the surrounding plains to an altitude of about 6,100 feet. North of Rawhide Butte, rocks of the Hartville Hills extend as a low but well-defined ridge as far as the Niobrara River. North of the river, a few isolated outcrops of similar strata indicate that the hills once had a greater northward extension (Whitcomb 1965).

Leasable Minerals

Coal

Coal leasing and development activities are not currently being conducted in the resource area. However, coal mining was an important part of Weston County's economy between 1889 and 1928. Bituminous coal of coking quality was mined at Cambria, 5 miles north of Newcastle, on a spur of the Burlington Railroad (map 3-1). The coal bed, located within the Lower Cretaceous Lakota Formation, averaged about five feet thick. The coal was mined out of five separate mines with total production amounting to 12,464,047 short tons (Rich, Pish, and Knell 1988). Much of the coal was used directly by the railroad, and coke was supplied to smelters in the northern Black Hills and elsewhere between 1891 and 1903. Small quantities of the same bituminous coal were mined at Aladdin in Crook County between 1898 and 1909 for domestic use and for the Chicago and Northwestern Railway. There has been no recorded production in any of these areas since 1935.

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Sporadic prospecting for additional minable deposits occurred in the early 1900s, but no new workable deposits were discovered (map 3-1). Coal deposits in the resource area appear to be restricted to relatively thin (one to seven feet) beds of the Lakota and Fall River formations and are not considered to be economic for mining purposes (map 3-3). Coal production has shifted to the center of the Powder River Basin in Campbell County where production is from beds of high-quality, low sulfur sub-bituminous coal in Tertiary strata (Wasatch and Fort Union formations).

It is not anticipated that coal leasing activities will occur in the resource area as long as abundant supplies of high quality sub-bituminous coal are available in nearby Campbell County.

Oil and Gas

The following is a summary of oil and gas activity in the Newcastle Resource Area. The reader is encouraged to turn to appendix H for a much more complete description of oil and gas activity and processes in the NRA. Appendix I presents the reasonably foreseeable development scenario for oil and gas activity.

The NRA covers the eastern Powder River Basin, which is the most prolific oil-producing basin in the Rocky Mountains. The earliest reported discovery in the NRA is the Moorcroft Field near Moorcroft, Wyoming in Crook County. Eleven geologic formations are productive in the NRA, and well depths range from very shallow (less than 100 feet) in the Newcastle and Osage areas to almost 11,000 feet in western Niobrara County.

The United States owns 2.12 million acres of oil and gas land in the NRA. This acreage is 43% of the total resource area and is interspersed with nonfederal oil and gas ownership. In the NRA, there are 0.29 million acres of BLM-administered public lands. Other federal agencies administer 0.42 million surface acres in the NRA (figure 3-3).

In November 1990, 3,578 oil and gas leases covering 1.52 million acres were in effect in the NRA. Of the leases in effect, 702 were productive (0.21 million acres) and 2,876 were not productive (1.31 million acres).

Federal oil and gas lease sales are held every two months. The amount of acreage sold from February 1989 through August 1991 (16 sales) is shown in figure 3-4. The total bonus from these sales is shown in figure 3-5. About half of the bonus money received from these sales is returned to the State of Wyoming.

Seismic exploration is a process where energy is transmitted into the subsurface (usually by explosives or low frequency vibrations) and the reflected energy waves

are recorded and electronically processed. The processed seismic profile shows the rock layers of the earth and is useful in locating oil and gas reservoirs. There were about 13 miles of seismic exploration on BLM-administered public lands in 1989 and 9.1 miles in 1990.

Before drilling operations can begin, an application for permit to drill (APD) must be approved by the authorized officer. An average of 65 APDs per year were approved by the authorized officer from 1987 through 1992. During calendar years 1987 through 1992 an average of 47 federal wells per year were drilled in the NRA, and 67 federal wells per year were abandoned.

Oil production from the NRA averaged about 7.7 million barrels per year from 1987 through 1991. This represents about 7.1% of the state's oil production. Gas production in the NRA is a relatively minor 2.9% of the state's total.

In 1989 about 57% (4.89 million barrels of oil) of the oil production and 60% (2.03 billion cubic feet of gas) of the gas production in the NRA were from federal leases, communitized areas, or units. The amount of federal oil production has increased both absolutely and relatively in the past few years.

During calendar years 1987 through 1992 there was an average of 1,026 (43% of all productive wells) productive federal oil and gas wells in the NRA. There were also 184 service injection wells and 149 shut-in wells, for a total of 1,359 nonplugged federal wells.

Production operations and facilities that involve federal minerals must meet federal requirements and are subject to BLM inspection and enforcement (I&E) regulations. High priority inspection items are inspected at least once per year.

Federal oil and gas unit and communitization agreements (CAs) are administered and approved by the BLM's Reservoir Management Group. Changes in unit or CA operator are not approved unless the NRA manager has determined that bond coverage is adequate.

Locatable Minerals

Locatable minerals are "those valuable mineral deposits" which are not included under the mineral leasing acts and do not include common varieties of sand, stone, gravel, cinders, pumice, and clay (Maley 1985). Mining claims, either placer or lode, are staked for locatable minerals.

At the resource area level, surface-disturbing activities under jurisdiction of the 43 CFR 3809 regulations are reviewed on a case-by-case basis. All surface-disturbing activities on mining claims require a notice submitted to BLM for a cumulative disturbance of five

FIGURE 3-3

OIL AND GAS AND SURFACE OWNERSHIP IN NRA
4.57 MILLION ACRES TOTAL

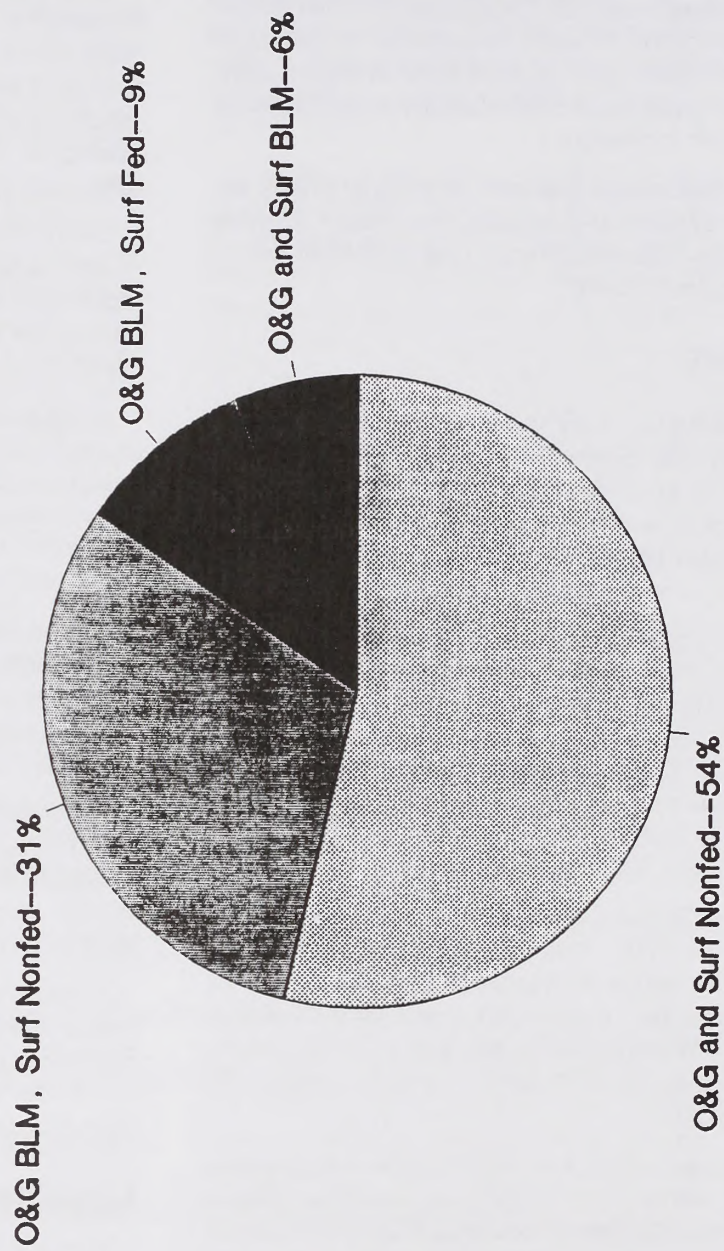


FIGURE 3-4

OIL AND GAS LEASE ACREAGE OFFERED AND SOLD FEDERAL COMPETITIVE OIL AND GAS LEASE SALES

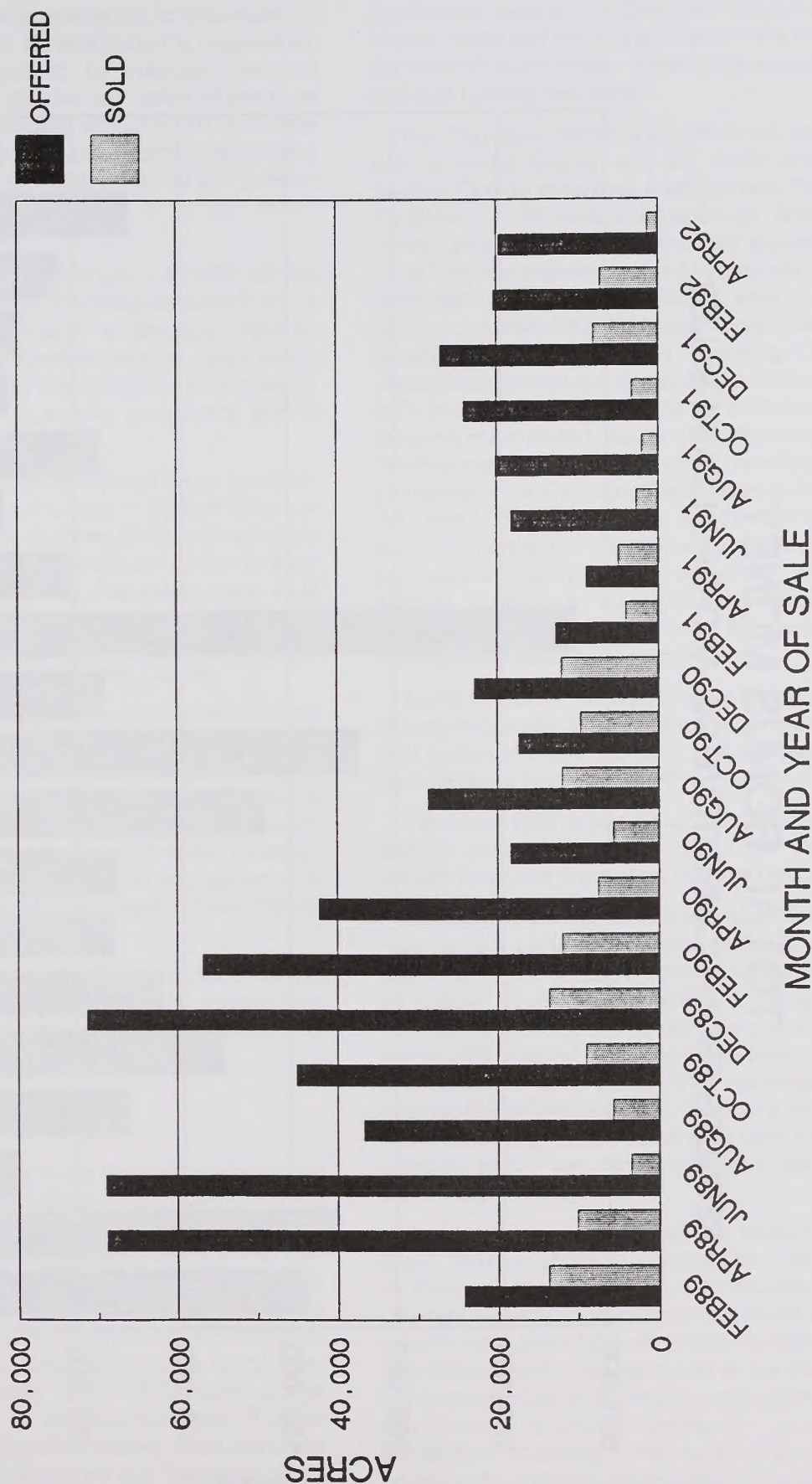
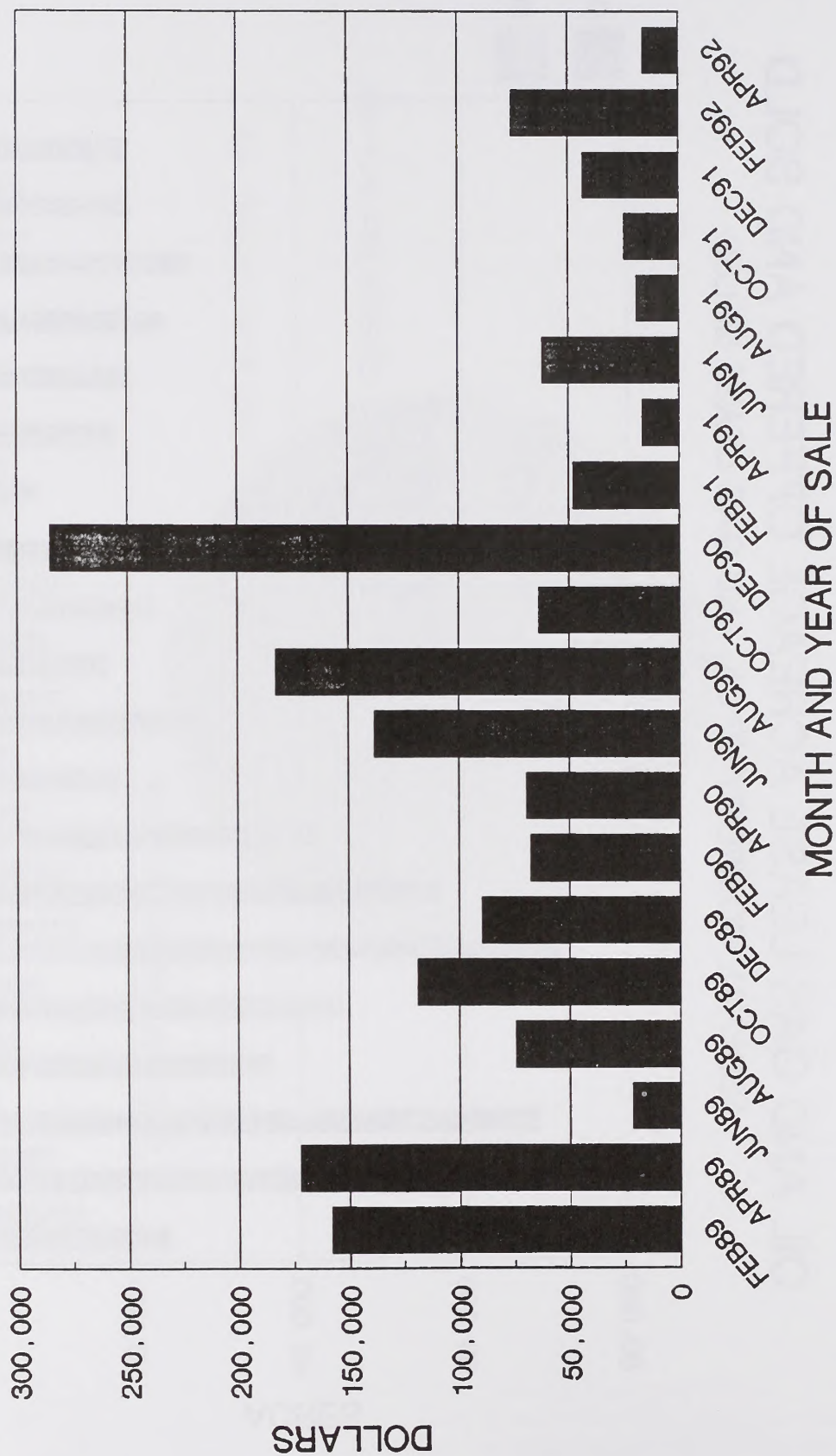


FIGURE 3-5

TOTAL BONUS MONEY RESULTS FROM COMPETITIVE OIL AND GAS LEASE SALES



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acres or less and a plan of operations for disturbances of more than five acres. No notification is required for casual use (non-mechanized; for example, pick and shovel). All operations, casual use, notice of intent, or plan of operations must comply with all federal and state laws pertaining to air quality, water quality, solid wastes, fisheries, wildlife and plant habitat, cultural and paleontological resources, and protection of survey monuments (43 CFR 3809.2).

Mining activities are regulated under 43 CFR 3809 to prevent undue degradation of surface resources and to ensure reasonable reclamation of disturbed sites on federal lands. The BLM conducts regular (twice yearly minimum) field monitoring inspections of mining activities on federal surface to ensure compliance and to check for unauthorized use.

All public lands are open to exploration for locatable minerals except those withdrawn to protect other resource values and uses or those lands with acquired minerals status. Acquired minerals are subject to leasing under 43 CFR 3500. The only areas under BLM jurisdiction in Newcastle Resource Area which are currently closed to the operation of the mining laws are BOR lands at Keyhole Reservoir in Crook County.

BLM has limited management authority over mining claim operations conducted under the General Mining Law of 1872. These operations are managed using the surface regulations in 43 CFR 3809. BLM is required to prevent unnecessary and undue degradation of public lands and provide for reasonable reclamation by applying the 43 CFR 3809 regulations and any agreements made with the Wyoming DEQ pursuant to those regulations.

There are approximately 1,800 active placer mining claims in the NRA, with bentonite, uranium, and gypsum being the principal locatable minerals. Presently, only bentonite is being mined.

Bentonite

In the resource area there are two principle bentonite mining areas, the northern Black Hills, or Colony Mining District, and the Clay Spur Mining District (map 3-4). The northern Black Hills bentonite mining district comprises an irregularly shaped area of about 980 square miles extending about 60 miles along the north side of the Black Hills of Wyoming and South Dakota into Montana. Within this district, many beds of bentonite occur interspersed with sedimentary strata of Cretaceous age (figure 3-6) that have an average thickness of about 3,000 feet and consist chiefly of marine shale, marl, and argillaceous sandstone (Knechtel and Patterson 1962). In the northern Black Hills mining district, the important

commercial beds are the Clay Spur bed at the top of the Mowry Shale and the E and F beds in the lower part of the Belle Fourche Shale. These beds average two and one-half to three feet thick.

The Clay Spur District is located in the south-central part of Crook County and the north-central part of Weston County extending from Keyhole Reservoir on the Belle Fourche River south to Osage, Wyoming. The mining area is a narrow sinuous belt approximately 30 miles long encompassing about 100 square miles which is mostly confined to the outcrop area of the Upper Cretaceous Belle Fourche Shale. It is 5 miles across at its widest point north of Upton, Wyoming. Outcropping Cretaceous formations dip gently southwestward at 2° to 3° throughout the district. At the northern and southern ends of the district, the dip abruptly increases to 20° or more, making mining unfeasible. Nearly all bentonite production in the Clay Spur District comes from the Clay Spur bed of the Mowry Shale. Another bentonite bed in the lower part of the Belle Fourche Shale (bed E) has produced a small quantity of bentonite. A very minor amount of bentonite also has been mined from the Newcastle Formation, but none of the operations were commercially successful (Davis 1965).

Some bentonite mining out of the Belle Fourche and Mowry shales has also occurred in the extreme southeast corner of Weston County and the extreme northeast corner of Niobrara County.

The Black Hills region, which includes both of these districts, accounts for about 45% of total United States sodium bentonite production (Allison 1988).

Exploration for and development of new bentonite reserves is a continuing process in Crook and Weston counties (map 3-4). Exploration activities are scattered throughout Crook County with the exception of the southeastern quarter. In Weston County most exploration activity is primarily in the north-central part of the county, with a little occurring in the southeastern corner near the South Dakota border. Bentonite deposits in the resource area generally occur at or near the surface, a situation which has led to extensive mining activity (USDI, BLM 1981a).

Active claims for bentonite are spread throughout Crook, Weston, and Niobrara counties. A detailed listing of these claims with respect to location, type, and claimant name is contained on microfiche on the Geographic Index in the NRA office and is updated quarterly. The primary bentonite claimants in the resource area are American Colloid Company and Bentonite Corporation (formerly NL Baroid Company). Active mining of bentonite is occurring in the resource area, mainly on private surface and private minerals in Crook and Weston counties. There is one mining operation (by American

GENERAL OUTCROP SECTION OF THE BLACK HILLS AREA					
	FORMATION	SECTION	THICKNESS IN FEET	DESCRIPTION	
TERTIARY	QUATERNARY	SANDS AND GRAVELS	0-50	Sand, gravel, and boulders.	
	PLIOCENE	OGALLALA GROUP	0-100	Light colored sands and silts.	
	MIOCENE	ARIKAREE GROUP	0-500	Light colored clays and silts.	
	OLIGOCENE	WHITE RIVER GROUP	0-600	Light colored clays with sandstone channel fillings and local limestone lenses	
	PALEOCENE	PORT UNION FORMATION	0-425	Light colored clays and sands, with coal-bed farther north.	
CRETACEOUS		TONGUE RIVER MEMBER	0-225	Green marine shales and yellow sandstones, the latter often as concretions.	
		CANNONBALL MEMBER	0-350	Sombre gray clays and sandstones with thin beds of lignite.	
		LUOLOW MEMBER			
	?	HELL CREEK FORMATION (Lance Formation)	425	Sombre-colored soft brown shale and gray sandstone, with thin lignite lenses in the upper part. Lower half more sandy. Many loglike concretions and thin lenses of iron carbonate.	
		FOX HILLS FORMATION	25-200	Grayish-white to yellow sandstone	
		PIERRE SHALE	1200-2000	Principal horizon of limestone lenses giving teepee buttes.	
		Sharon Springs Mem.		Dark-gray shale containing scattered concretions.	
		NIOBRARA FORMATION	100-225	Black fissile shale with concretions.	
		Turner Sand Zone		Grayish-white to yellow sandstone	
		CARLILE FORMATION	400-750	Impure chalk and calcareous shale.	
		Wall Creek Sands		Light-gray shale with numerous large concretions and sandy layers.	
		GREENHORN FORMATION	(25-30)	Dark-gray shale	
		BELLE FOURCHE SHALE	300-550	Impure sloppy limestone. Weathers buff.	
		MOWRY	150-250	Dark-gray calcareous shale, with thin Orman Lake limestone at base.	
		DUYNNESON	20-60	Gray shale with scattered limestone concretions.	
		NEWCASTLE		Clay upon bentonite at base.	
		SKULL CREEK SHALE	170-270	Light-gray siliceous shale. Fish scales and thin layers of bentonite.	
		FALL RIVER [DAKOTA (?) ss	10-200	Brown to light yellow and white sandstone.	
		Fusion Shale	10-188	Dark gray to black shale	
		Minnewaste ls	0-25	Massive to sloppy sandstone.	
JURASSIC		MORRISON FORMATION	0-220	Green to maroon shale. Thin sandstone.	
		UNKPAPA SS	0-225	Massive fine-grained sandstone.	
		SUNDANCE FM	250-450	Greenish-gray shale, thin limestone lenses. Glauconitic sandstone; red ss. near middle.	
		GYPSUM SPRING	0-45	Red siltstone, gypsum, and limestone.	
		SPEARFISH FORMATION	250-700	Red sandy shale, soft red sandstone and siltstone with gypsum and thin limestone layers.	
		Gaass Egg Equivalent		Gypsum locally near the base.	
		MINNEKAHTA LIMESTONE	30-50	Massive gray, laminated limestone.	
		OPECHE FORMATION	50-135	Red shale and sandstone.	
		MINNELUSA FORMATION	350-850	Yellow to red cross-bedded sandstone, limestone, and onhydrite locally at top. Interbedded sandstone, limestone, dolomite, shale, and onhydrite.	
				Red shale with interbedded limestone and sandstone at base.	
MISSISSIPPIAN		PAHASAPA (MAISON) LIMESTONE	300-630	Massive light-colored limestone. Dolomite in part. Concretionary in upper part.	
DEVONIAN		ENGLEWOOD LIMESTONE	30-60	Pink to buff limestone. Shale locally at base.	
ORDOVICIAN		WHITEWOOD (RED RIVER) FORMATION	0-60	Buff dolomite and limestone.	
		WINNIPEG FORMATION	0-100	Green shale with siltstone.	
CAMBRIAN		DEADWOOD FORMATION	10-400	Massive buff sandstone. Greenish glauconitic shale, flaggy dolomite and flatpebble limestone conglomerate. Sandstone, with conglomerate locally at the base.	
PRE-CAMBRIAN		METAMORPHIC and IGNEOUS ROCKS		Schist, slate, quartzite, and arkosic grit. Intruded by diorite, metamorphosed to amphibolite, and by granite and pegmatite.	

(Wyoming Geological Association Guidebook, 1968)

Figure 3-6
General Stratigraphic Chart

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Colloid Company) near Upton which is on public land with acquired mineral status administered under a mining lease by BLM, Casper District office. American Colloid Company and Bentonite Corporation both have bentonite mills at Upton and Colony.

Since about half of the bentonite produced in Wyoming is sold to the drilling mud industry, the bentonite industry has been in a slump in recent years due to the decrease in oil and gas exploration activity. Pelletizing and foundry sandbonding make up the bulk of the remainder of uses.

It is estimated that there is at least 100 million tons of bentonite reserves in the Black Hills region (Allison

1988). Total bentonite production out of Crook and Weston counties in 1989 was 1,123,151 tons (table 3-3). Under current management conditions, activity in the bentonite segment of the locatable minerals program can be expected to remain about the same in the foreseeable future (five to ten years). Lifting of the withdrawal status of lands at the west end of Keyhole Reservoir in Crook County could result in some exploration and mining activity out of some 30-year-old pits, which may have some minable quantities of bentonite left. Another boom in the oil and gas industry in the future could be expected to cause a significant increase in activity.

TABLE 3-3
BENTONITE PRODUCTION IN CROOK AND WESTON COUNTIES IN 1989

Operator	Mine Name	County	Facilities Operated	Number of Employees	Production (tons)
American Colloid Company	Colony East Mill	Crook	bentonite mill	27	260,492
American Colloid Company	Colony West Mill	Crook	bentonite mill	26	209,252
American Colloid Company	Colony Mine	Crook	open pit bentonite mine	28	^a
American Colloid Company	Upton Mill	Weston	bentonite mill	46	310,832
American Colloid Company	Upton Mine	Weston	open pit bentonite mine	13	^a
Bentonite Corporation	Colony Mill	Crook	bentonite mill	62	342,575
	Colony Mine	Crook	open pit bentonite mine	15	^a
					1,123,151

^a Shown at mill.

SOURCE: WOSIM 1990.

Gypsum

Gypsum beds 10 to 30 feet thick occur in the Spearfish Formation and crop out almost continually around the Black Hills. Gypsum in beds 25 to 40 feet thick occur in the Minnelusa Formation in eastern Crook County and have only been used for fabrication into art objects. In the past, short-lived plaster mills have been operated in several Black Hills towns, including Sundance, Wyoming. At present, production is only occurring near Rapid City, South Dakota (Gries 1974).

Uranium

The only other known significant locatable mineral in the resource area is uranium, but there is no active mining of uranium taking place. Past commercial mining has occurred in Crook and Niobrara counties.

Commercial deposits of uranium in Wyoming were first discovered in 1918 in Niobrara County at the Silver Cliff Mine, located ½ mile west of Lusk. Several small shipments were made from this mine in 1918, 1922, and during the 1950s and 1960s (Elevatorski 1976). During the 1950s, two uranium mines were opened in the Lance Creek area. However, very little uranium was produced

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from either of these mines, and they are presently inactive (USDI, BLM 1981b).

The primary uranium mining district in the NRA is the Black Hills mining district. Located in Crook County, it contains five subdistricts: Elkhorn Creek, Hulett Creek (New Haven), Barlow Canyon, Carlile, and Aladdin (map 3-5). Commercial deposits of uranium in Crook County were first discovered in 1952 near Carlile, Wyoming. From 1953 to 1966, 90% of the total production (2.7 million pounds of uranium) came from the Hulett Creek and Carlile districts (Elevatorski 1976). The Hauber Mine, in the Hulett Creek district, was the largest mine in the northern Black Hills. It accounted for 83% of the uranium produced in the area (Chenoweth 1988). From 1953 through 1968, mines on 29 properties in the northern Black Hills produced 719,911 tons of ore averaging 0.22% uranium and containing 3,151,474 pounds of uranium (Chenoweth 1988).

All uranium ore produced in Crook County has come from fluvial sandstones and conglomerates of the Lower Cretaceous Lakota Formation and in marginal marine sandstones and siltstones of the overlying Fall River Formation. All of the major mining districts in Crook County are located near paleontological stream channels, which may have acted as conduits for mineralizing solutions. Where the fine-grained materials have eroded, groundwaters have migrated through fluvial sandstones into a reducing environment conducive to deposition of uranium minerals. Production from Niobrara County has been from stream-deposited, conglomeratic, sandstone lenses of the Tertiary White River Formation (USDI, BLM 1981b).

In Weston County minor amounts of uranium have been extracted from two prospect areas about 10 miles southeast of Newcastle from sandstones of the Fall River Formation.

Surface outcrops of the Fall River and Lakota sandstones occur throughout the resource area, but little or no active exploration for uranium is occurring. Most, if not all, of the claims located for uranium are inactive at this time.

Exploration in the northern Black Hills during the uranium boom of the late 1970s identified additional ore deposits which could be developed in the future (Chenoweth 1988). Although the potential for discovery and development of significant new uranium deposits in Crook and Weston counties is fairly high, the amount of activity in uranium exploration cannot be expected to increase in the foreseeable future (five to ten years).

Metallic Minerals

Three metallic mineral districts, made up of Tertiary alkalic igneous complexes, are located in the NRA in Crook County (map 3-6). Their names and types of deposits are as follows:

1. Bear Lodge Mountains – low-grade gold and rare earth deposits.
2. Black Buttes complex – galena, silver, lead, zinc, and traces of gold.
3. Mineral Hill – anomalous amounts of gold, cassiterite, magnetite, and columbite-tantalite (Hausel and Sutherland 1988).

All of these districts are located on FS lands, and no commercial production is known to be occurring.

Stream sediment samples testing uranium potential of Cretaceous sandstones along the western margin of the Black Hills uplift compiled by Albert (1986) revealed anomalous gold values in western Crook County and northeastern Weston County. Gold content ranged between 0.20 to 0.41 parts per million (ppm). The original source of the gold is believed to be volcanic ash falls. It is not known whether any of this gold is present in commercial quantities.

Salable Minerals

Salable minerals include, but are not limited to, common varieties of sand, stone, gravel, pumice, cinders, clay, and petrified wood. Disposal is authorized by the Mineral Materials Act of 1947, as amended. Historically, salable minerals have been used in the NRA for building materials, road surfaces, and tools. Today, mineral materials are used primarily for building and maintaining roads and activities associated with the oil and gas industry.

In the Newcastle Resource Area there are several different forms of stone aggregate materials which are used for construction projects: sand and gravel, sandstone, shale, limestone and dolomite, and igneous and metamorphic rocks (granite).

Sources of mineral materials for aggregate are more readily available in Weston and Crook counties than in Niobrara County. Deposits of sand and gravel, limestone, and shale are scattered throughout Weston and Crook counties and are used primarily as aggregate materials for road surfacing by state and county agencies (map 3-7). A few gravel deposits are present in terraces along drainage and in some sandstone outcrops in the northern part of Niobrara County. In the southern part of the county a large amount of limestone

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is present which could be quarried and crushed for aggregate use. A granite outcrop at Bald Butte in southern Niobrara County contains material which could be used as railroad ballast.

Specific mineral material types and their locations within the resource area by county are listed in table 3-4.

At the resource area level, disposal of mineral materials is on a case-by-case basis. Applications for salable minerals are reviewed and processed on a case-by-case basis as they are received. Appropriate surface disturbance mitigation requirements are included in the permits (appendix E).

Regular field monitoring inspections of salable mineral permit areas are conducted biannually to ensure compliance and to check for unauthorized use. Material sites average between three and five acres, and sites may be active under various (or successive) permits for from one to ten years. Site reclamation is initiated after the mineral material is removed.

It is the resource area's policy to provide sand, gravel, and stone from federal mineral deposits as necessary to meet the needs for construction and maintenance projects in the resource area (USDI, BLM 1981). Although demand for mineral materials in Crook, Weston, and Niobrara counties is low, the maintenance and construction of roadways are necessary to create and maintain a viable economic base for the resource area.

Activity in the mineral material program in the Newcastle Resource Area has been limited in recent years due to the downswing in the economy, locally and statewide. The location of a good portion of the mineral deposits is on private surface.

In the NRA the primary uses of federal minerals are in the form of free use permits (FUPs) issued to county road and bridge departments. The majority of the FUPs issued are in Crook and Weston counties. Mineral materials permit activity, as of February 1991, for the three counties is shown in table 3-5. Total production from active case files is shown in table 3-6. There are currently no community pits or common use areas in the resource area.

The recent conversion of Wyoming State Highway Department FUPs to Title 23 Letter of Consent actions has impacted activity and decreased the number of permit areas. The existence of split estate and isolated federal lands (lands surrounded by private surface) significantly impedes the mineral materials program.

Throughout the resource area access to the majority of mineral material sites necessitates negotiation with the surface owner. More than 50% of the mineral material requirements are being met by private sources.

Management opportunities, as identified in the MFP and the unit resource analysis (URA), consist of acquiring more detailed information on the occurrence of aggregate deposits in the resource area and addressing

**TABLE 3-4
MINERAL MATERIAL TYPES AND LOCATIONS**

County	Type of Deposit	Location
Crook	Terrace sand and gravel	along drainages; scattered throughout the county
	Shale	northwestern portion of the county
	Alluvial sand and gravel	western and northeastern portions of the county along drainages
	Limestone	eastern portion of county along flanks of Black Hills
Weston	Alluvial sand and gravel	along drainages; scattered throughout the county
	Shale	western $\frac{2}{3}$ of county
	Limestone	along eastern border of county along the flanks of Black Hills
	Terrace sand and gravel	sparse deposits in eastern portion of county along flanks of Black Hills
Niobrara	Alluvial sand and gravel	along drainages in the northern portion of the county
	Limestone	southern portion of the county

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TABLE 3-5
FREE-USE PERMIT ACTIVITY IN THE RESOURCE AREA

	Free Use Permits	Sales	Sand and Gravel	Shales	Limestone
Crook	2	0	0	2	0
Weston	2	1	1	1	1
Niobrara	1	0	1	0	0

TABLE 3-6
TOTAL PRODUCTION FROM FREE-USE PERMITS
IN THE RESOURCE AREA

	Production (cubic yards)	Acres (disturbed)
Sand and gravel	2,700	10
Shale	113,299	24
Limestone	1,405,274	30

problems related to access (for example, split estate and land use patterns). Some documentation on mineral material sites on public lands within the resource area has been done. The report, "Aggregate Materials of the Newcastle Resource Area" was completed in 1978 (Thomas). Overlays of each county showing areas of identified and unidentified economic resources was compiled in conjunction with the unit resource analysis in 1979 and are located in the resource area office (USDI, BLM 1981, 1981a, 1981b). More detailed documentation, such as a map of each county identifying aggregate sites on public lands, particularly those near public roads, is needed. Field verification of these sites would be desirable, also. The most critical economic factor in the selection of material sites (by industry) is transportation distance. Transportation costs are the most sensitive factors affecting construction costs, and nearby sources of aggregate material are an economic advantage.

The amount of activity in the resource area mineral materials program cannot be expected to increase in the foreseeable future unless economic conditions in the resource area and Wyoming improve, particularly the oil and gas industry.

Geothermal Steam

The eastern portion of the resource area lies within the Madison aquifer. However, no data is available as to whether subsurface temperatures and pressures are suitable for geothermal steam production.

Geologic Hazards

Geologic hazards occur in many forms and to varying degrees in the resource area (map 3-8). The most acute geologic hazard is hydrogen sulfide gas liberated by oil and gas operations. Other geologic hazards in their approximate order of importance are landslides, shrinking and swelling clays, radon and selenium, earthquakes, and windblown sand.

Hydrogen Sulfide

Hydrogen sulfide is a flammable, extremely toxic gas that occurs in two areas in the NRA (figure 3-7). In western Crook and northwestern Weston counties, the gas is the result of secondary recovery operations and is associated with petroleum tank and treater facilities in fields undergoing secondary or tertiary recovery. Hydrogen sulfide occurs in at least 30% of the wells. Where present, concentrations are usually between 0.2% and 0.6% (0.6% is lethal).

AFFECTED ENVIRONMENT

In central Niobrara County, hydrogen sulfide occurs as a natural gas in some petroleum reservoirs. Some wells have concentrations of 20% or more; gas from one well in the NRA is 48% hydrogen sulfide. The gas may occur in dangerous quantities in all oil and gas operations from drilling through plugging and abandonment.

In central Niobrara County where hydrogen sulfide is native, a contingency plan is required for all drilling, workover, and plugging operations that involve potential hydrogen sulfide-bearing horizons on federal minerals. No contingency plan is required for drilling, workover, or plugging operations in Crook or Weston counties.

A radius of exposure is analyzed on federal mineral production facilities in hydrogen sulfide areas. Based on the results of that analysis, contingency plans may be required.

Landslides

Most landslides are in the Black Hills area of Crook County but several have been identified in other parts of the NRA. Figures 3-8, 3-9, and 3-10 are generalized landslide maps for each county in the NRA (WGS 1989). All types of landslides, active as well as inactive, are shown.

Most oil and gas activity is not in landslide areas. Potential for landslides (especially in western Crook County) can be found in areas of oil and gas activity.

The BLM has no management directives for hazards caused by landslides. If the BLM receives a request to permit an action in a landslide area, the hazard would be addressed at that time.

Shrinking and Swelling Clays, Radon and Selenium, Earthquakes, and Windblown Sand

The extent of these geologic hazards is not known, but they are not thought to be extensive in the NRA. The BLM also has no specific management plan for them.

Shrinking and swelling clays are mainly due to the absorption and desorption of water into bentonite. In the resource area, several geologic formations contain bentonite. Shrinking and swelling clays can damage structures if enough water is present to cause swelling. This occurs near the surface and can usually be controlled by adequate drainage and the amount of water that is allowed to contact the bentonite.

Radon is a product of the natural radioactive decay of uranium and should be anticipated in areas with high uranium content. Many areas of uranium mineralization are present in the NRA. Data on radon and selenium are

sparse and only very generalized. Background radiation values from Harris (1989) do not show any areas of unusually high gamma radiation in the NRA.

Selenium in potentially toxic amounts may be present in the NRA. Case and Cannia (1988) show an area extending from northwest to southeast across the resource area with geologic formations that have the potential to support vegetation that may be highly toxic to animals in localized areas (figure 3-11). Selenium indicator plants are present in the NRA; however, few if any cases of selenium poisoning have occurred.

Earthquake epicenters have been reported in and near the NRA (Case et al. 1990) but none had a magnitude greater than five on the Richter scale, which is the threshold for damage. Case (1990) indicates that the earthquake danger in the resource area is low.

Windblown sand, although present in the NRA, appears to be a very minor geologic hazard (figure 3-12).

Paleontology Resources

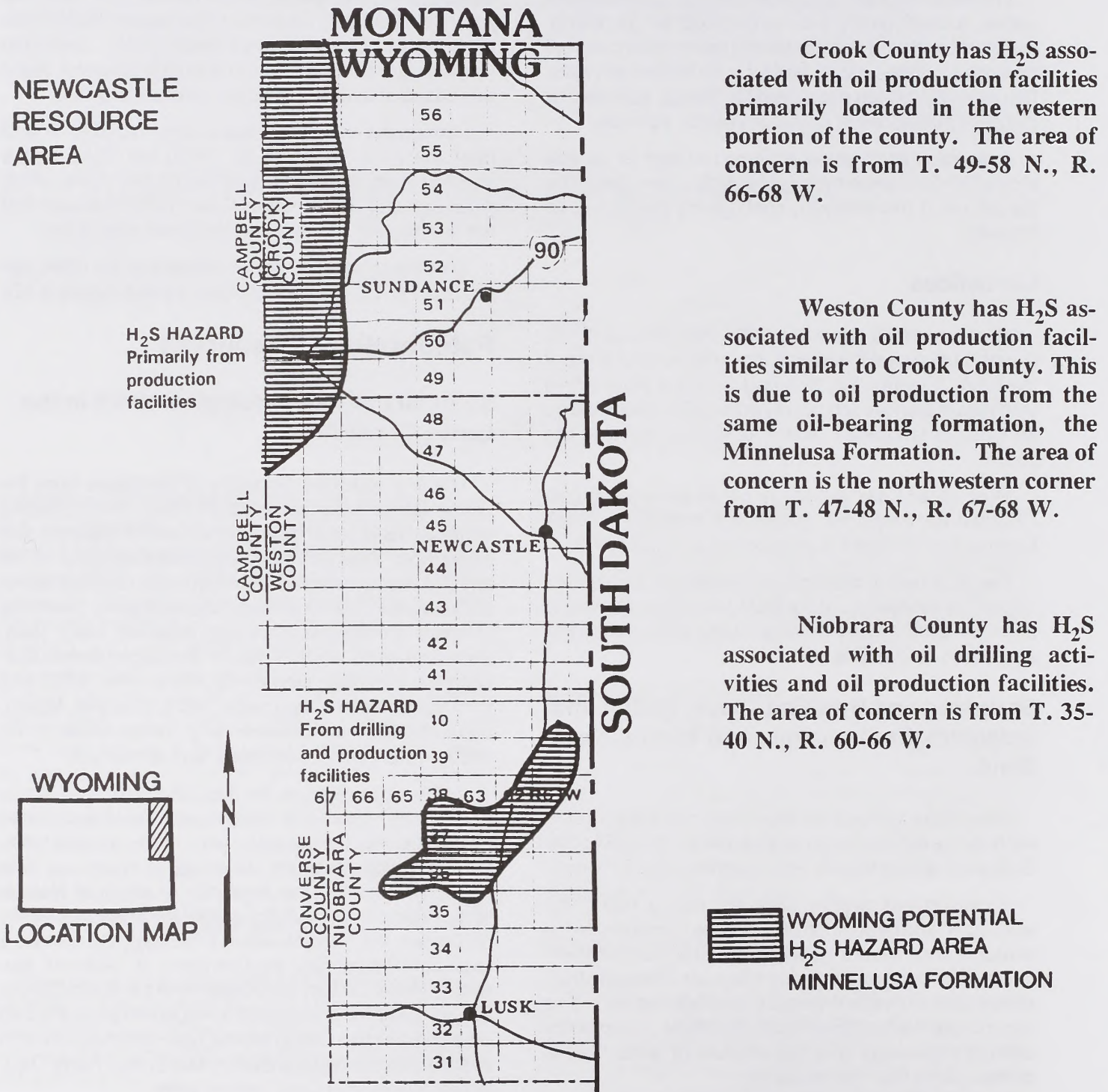
Summary of Paleontological Work in the Lance Creek Area

The first recorded discovery of dinosaurs from the Lance Creek area occurred in 1888, and collecting began in 1889. For three years, John B. Hatcher and crews from Yale University excavated dinosaur skulls and skeletons, discovered the first major concentrations of Cretaceous mammal teeth, and sent great quantities of fossils to museums in the East (Hatcher, 1893, 1896; Hatcher, Marsh, and Lull 1907). Although horned dinosaurs were first discovered in Montana in the 1850s, and from southwestern Wyoming in 1872, (Hatcher, Marsh, and Lull 1907), the discoveries at Lance Creek in the 1880s were the most complete and spectacular.

In the century since the first discoveries at Lance Creek, major museums from all over the United States have collected display specimens here—among them, the Geological Museum, University of Wyoming; Yale Peabody Museum; the American Museum of Natural History (New York City); Princeton University; University of Kansas; the Field Museum (Chicago); the Carnegie Museum (Pittsburgh); the University of California Museum of Paleontology (Berkeley); and the South Dakota School of Mines. Specimens from Lance Creek are also on display at the United States National Museum, and even in Europe (Natural History Museum of Paris; Geological Museum at Delft, Netherlands).

But museum displays are not the only noteworthy fossils from Lance Creek. Many small fossils of mammals, fish, birds, turtles, crocodiles, salamanders, liz-

FIGURE 3-7
LOCATION OF AREAS WHERE HYDROGEN SULFIDE
IS A GEOLOGIC HAZARD



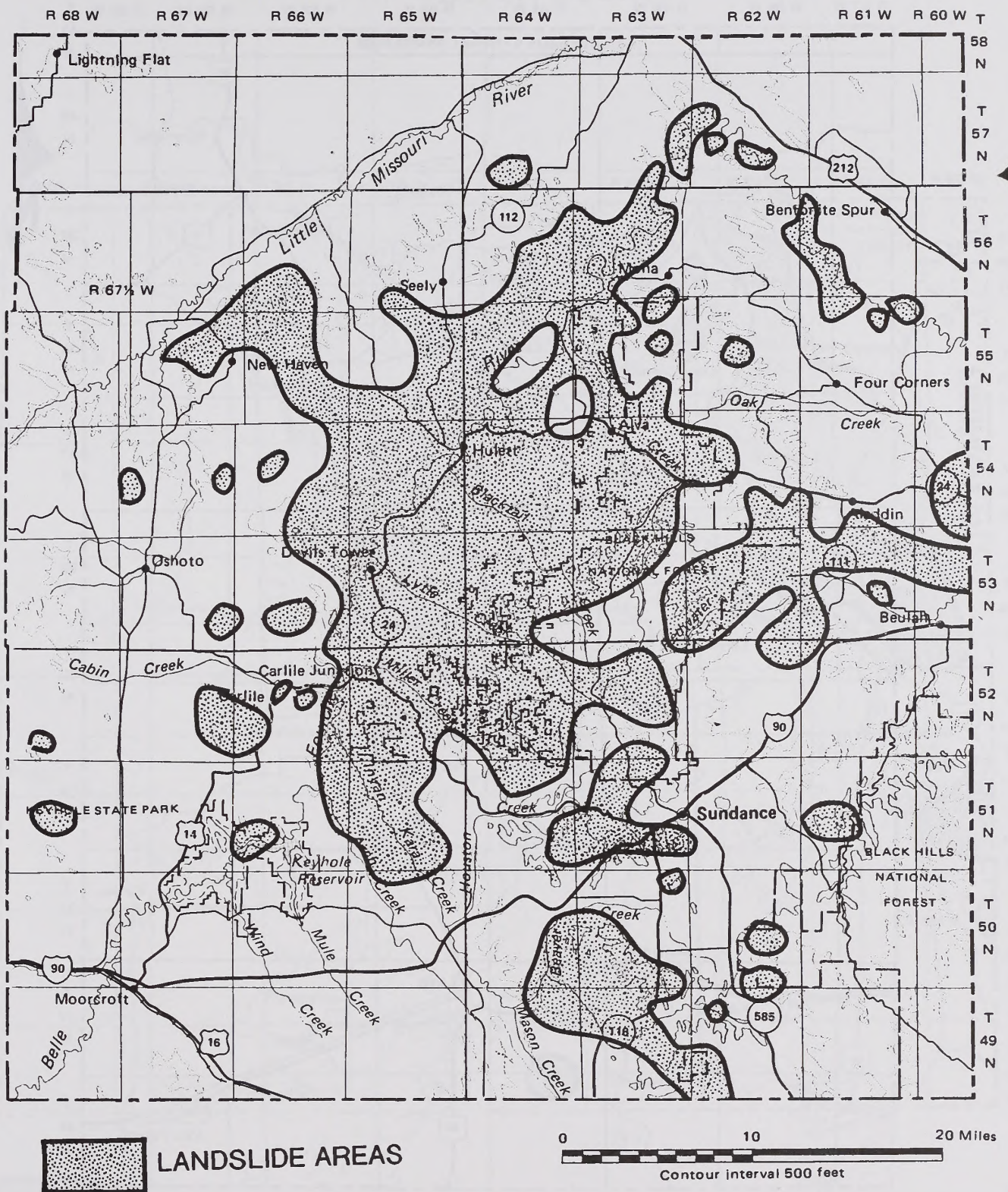
Crook County has H₂S associated with oil production facilities primarily located in the western portion of the county. The area of concern is from T. 49-58 N., R. 66-68 W.

Weston County has H₂S associated with oil production facilities similar to Crook County. This is due to oil production from the same oil-bearing formation, the Minnelusa Formation. The area of concern is the northwestern corner from T. 47-48 N., R. 67-68 W.

Niobrara County has H₂S associated with oil drilling activities and oil production facilities. The area of concern is from T. 35-40 N., R. 60-66 W.

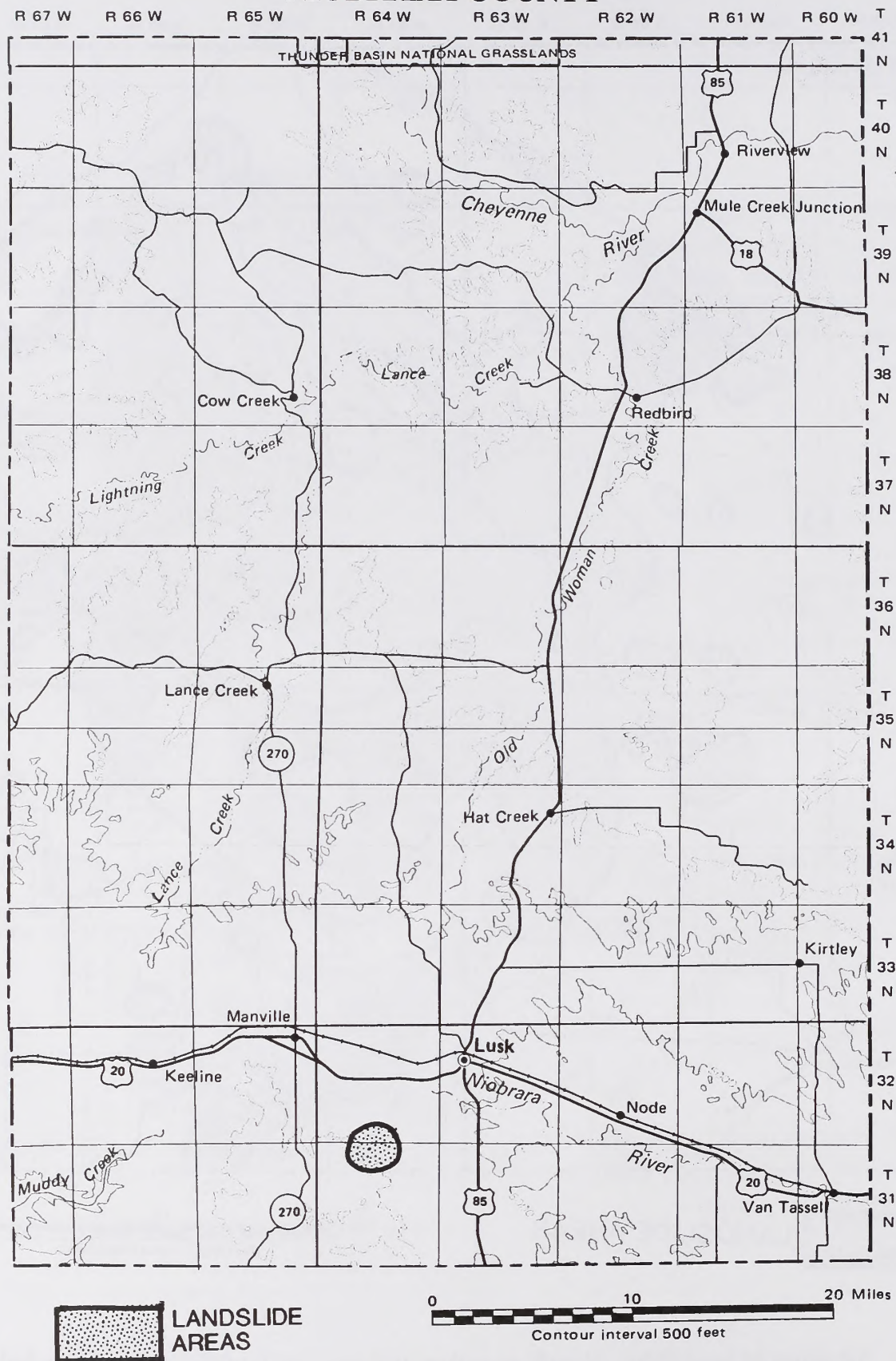
The highest concentrations are in Niobrara County where one well produced gas that was 48% hydrogen sulfide.

FIGURE 3-8
GENERALIZED MAP OF LANDSLIDE AREAS IN
CROOK COUNTY



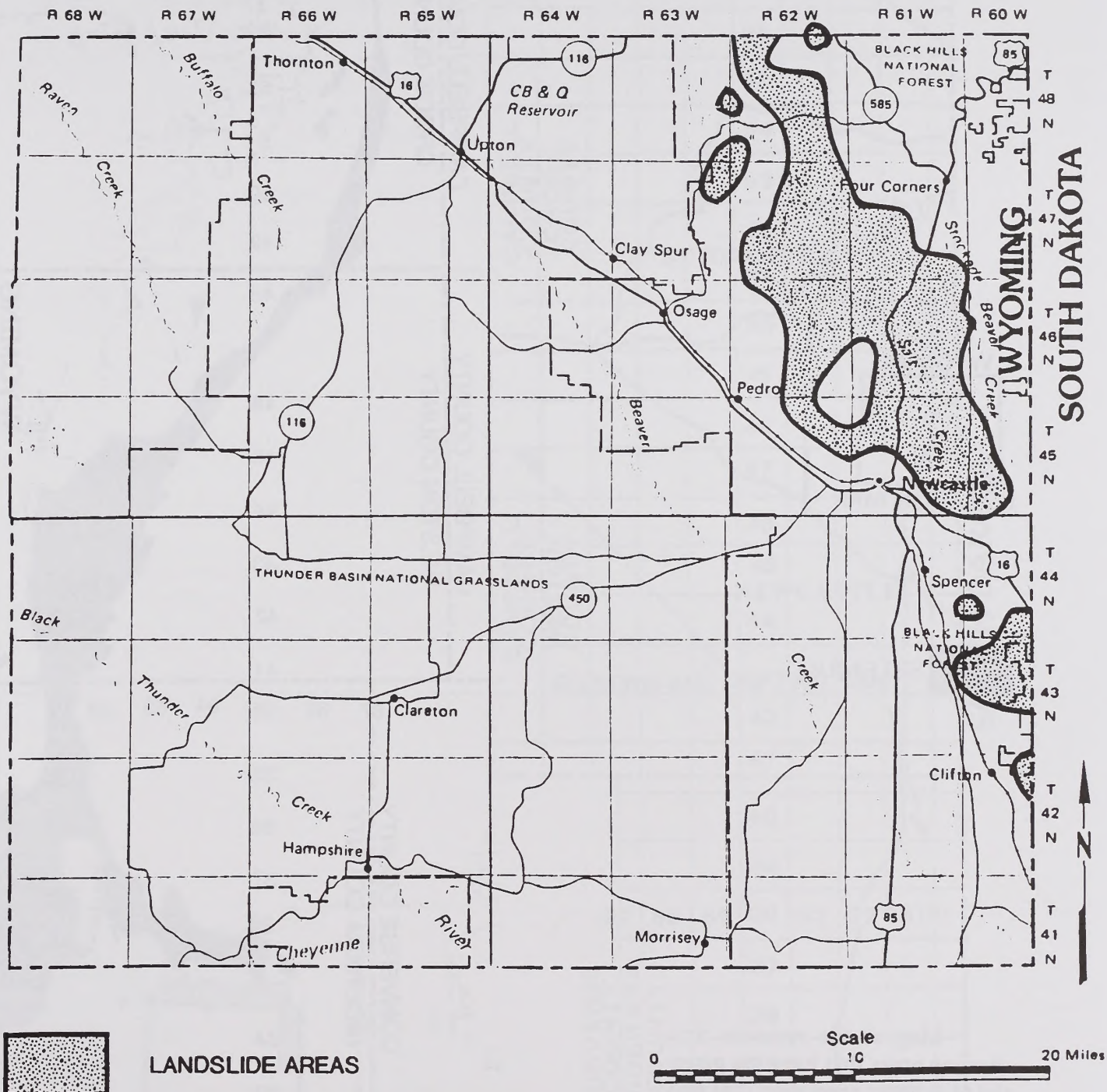
All types of landslides, as well as active and inactive landslides, are included. This map was compiled from several 7½-minute quadrangle maps by Laura L. Larson and James C. Case of the Geological Survey, Wyoming.

FIGURE 3-9 **GENERALIZED MAP OF LANDSLIDE AREAS IN** **NIORARA COUNTY**



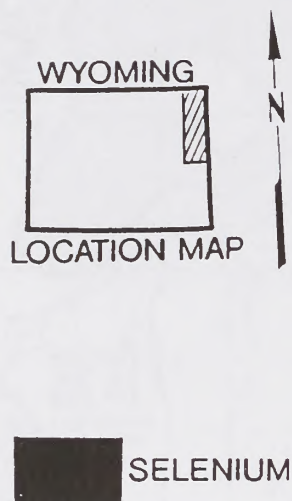
All types of landslides, as well as active and inactive landslides, are included. This map was compiled from several 7½-minute quadrangle maps by Laura L. Larson and James C. Case of the Geological Survey, Wyoming.

FIGURE 3-10
GENERALIZED MAP OF LANDSLIDE AREAS IN
WESTON COUNTY



All types of landslides, as well as active and inactive landslides, are included. This map was compiled from several 7½-minute quadrangle maps by Laura L. Larson and James C. Case of the Geological Survey, Wyoming.

FIGURE 3-11
GENERALIZED MAP OF THE NRA
SHOWING AREAS WITH SELENIUM



Map of the resource area showing areas that have the potential to support vegetation that may be highly toxic to animals in localized areas. Map is from Cannia (1988).

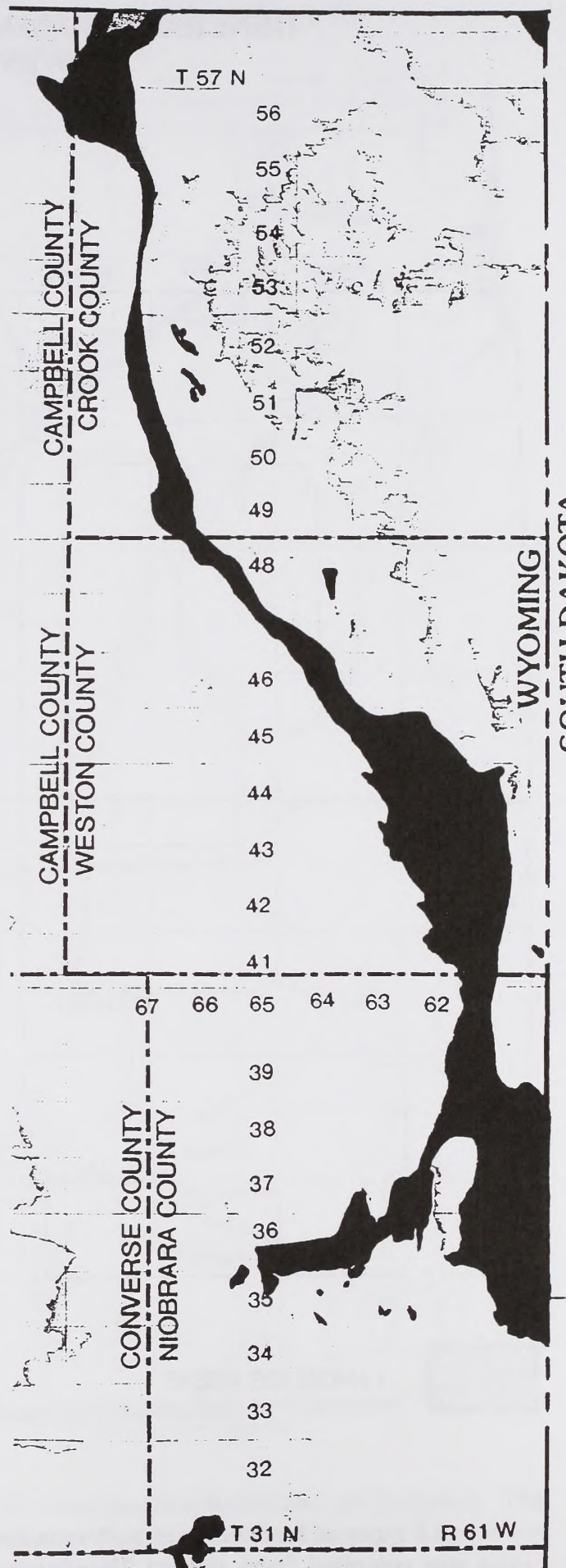
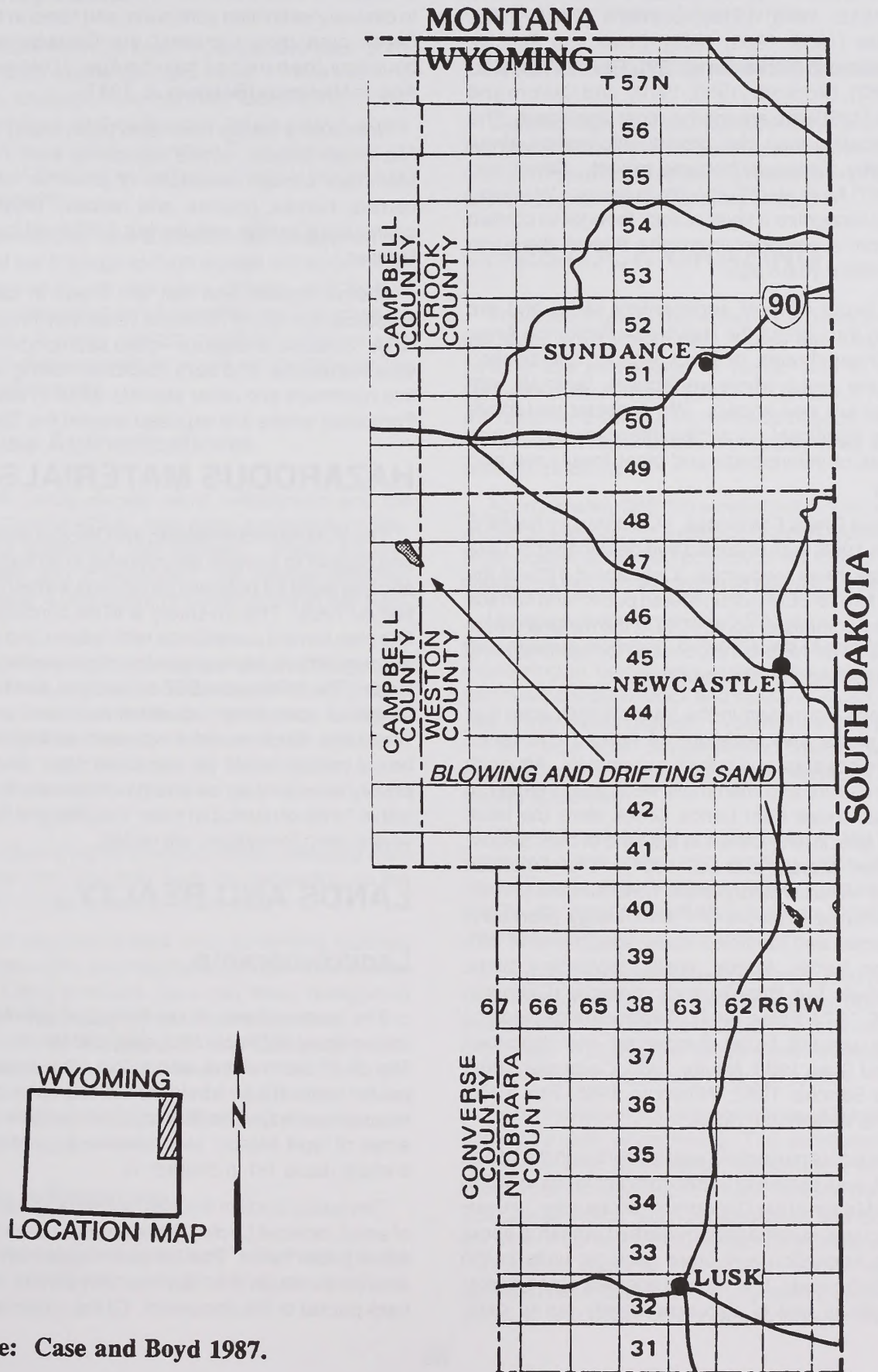


FIGURE 3-12
GENERALIZED MAP OF WINDBLOWN AREAS IN
THE NEWCASTLE RESOURCE AREA



Source: Case and Boyd 1987.

AFFECTED ENVIRONMENT

ards, and plants from this area have been collected for research and study by paleontologists trying to understand the changes that occurred about 65 million years ago at the end of the Age of Dinosaurs. Publications by Gilmore (1910, 1915, 1916), Clemens (1963, 1966, 1973), Estes (1964, 1965, 1969), Estes and Sanchiz (1982), Estes and Berberian (1969), Fox (1976), Carpenter (1982), Brodkorb (1963, 1970), and Ostrom and Wellnhofer (1990) are among the most significant. The Lance Formation may also provide information about how and why dinosaurs became extinct. Bohor and others (1987) have identified a site in eastern Wyoming where they recognize a layer of rock thought to contain material from a comet or meteorite that hit the earth about 65 million years ago.

Fossils occur in most sedimentary rocks and are widespread throughout the Newcastle Resource Area. Most are invertebrates (animals without backbones), but there are areas where vertebrates (animals with backbones) are well known. We consider vertebrate fossils to be significant, nonrenewable resources. Some occurrences of invertebrate and plant fossils are also noteworthy.

The Lance Creek Fossil area, nominated by the NPS as a NNL in 1966, was enlarged and designated in 1973 to recognize these resources. Only about 12% of the area of the NNL is BLM-administered public land surface although we administer some 70% of the mineral estate in this area. The NPS is responsible for administering and implementing the NNL program.

The Lance Formation in the Lance Creek area has produced skulls and skeletons of horned dinosaurs, duckbilled dinosaurs, and primitive mammals. Although horned dinosaurs and mammals were found earlier in other areas, those from Lance Creek were the best-preserved specimens known at the time of their discovery (Hatcher, Marsh, and Lull 1907). The American Museum of Natural History (New York) and the University of California Museum of Paleontology (Berkeley) have collected and identified many specimens of fish, amphibians, turtles, lizards, snails, crocodiles, birds, and mammals but little dinosaur material (Clemens, 1963, 1966, 1973; Estes 1964). Additional localities and specimens are still being discovered and described (Galton and Sues 1983; Naylor 1983; Carpenter 1982; Estes and Sanchiz 1982; Whitmore 1985; Fox 1976; Ostrom and Wellnhofer 1990).

An inventory of paleontological resources in the Lance Creek NNL was compiled under contract for us in 1979. William G. Melton of the Department of Geology, University of Montana, summarized published research about the Lance Formation and other geologic units in the area. Unfortunately, this report repeated some earlier misconceptions and is also now largely out of date.

Current research in the Lance Creek area is focused on changes in the kinds of animals and plants that lived during and after the end of the Age of Dinosaurs. Scientific debate over the events and conditions that led to dinosaur extinction continues, and rocks in the Lance Creek area may represent the Cretaceous/Tertiary boundary, the transition from the Age of Dinosaurs to the Age of Mammals (Bohor et al. 1987).

Noteworthy fossils have also been found along the Hat Creek Breaks, where sediments from the Age of Mammals contain skeletons of primitive cats, dogs, camels, horses, rodents, and rabbits. Most of these animals are extinct species but would still look almost familiar.

Marine reptiles and fish are found in deposits of Mesozoic age (25 to 70 million years old) throughout the NRA. Jurassic dinosaurs—giant sauropods, the carnivore *Allosaurus*, and early duckbills—along with primitive mammals and other animals occur in the Morrison Formation where it is exposed around the Black Hills.

HAZARDOUS MATERIALS

The BLM has committed to the Office of Management and Budget to compile an inventory of all hazardous oil and gas wells for potential hazardous waste contamination by 1998. This inventory is to be conducted as the first step toward compliance with federal and state laws and regulations managing hazardous wastes on public lands. The NRA has 4,957 oil and gas well bores in all stages of completion, abandonment, and production. Well sites which would have used drilling muds with heavy metals would be inspected first. Another high priority inventory for oil and gas fields are those fields within 1 mile of municipal water supplies and those fields where deep formations are drilled.

LANDS AND REALTY

Landownership

The planning area is comprised of approximately 5 million acres in Crook, Niobrara, and Weston counties. The BLM administers about 291,000 acres (6%) of public lands (BLM-administered federal surface and mineral estates). The BLM also administers 1.4 million acres of “split estate,” federal minerals and nonfederal surface (table 1-1 in chapter 1).

The public lands in the planning area consist primarily of small, isolated tracts. There are few areas of concentrated public lands. The landownership in the planning area is shown on the “Surface Ownership” map in the back pocket of this document. Of the public lands in the

NRA, 60% have legal access although only 38% have practical legal vehicle access.

Land Disposals

Land disposals in the planning area have been completed for both exchanges and sales. There were 13 land sales, totaling 616 acres, from 1985 through 1989. There were three land exchanges, totaling 2,016 acres, from 1985 through 1990. Appendix B contains a detailed discussion of the Casper District's goals for landowner-ship adjustments.

Local demand for land disposal actions has been low because of such things as high market value, processing timeframes, lower workload priority, and lack of funding for processing small parcels (1 to 120 acres) of public land. If these current practices continue, the demand for disposal actions would not be expected to increase significantly.

Land Use Authorizations

All public lands, except some withdrawals and the Whoopup Canyon ACEC, have been available for rights-of-way and temporary use permits. There are 317 rights-of-way and 2 temporary use permits affecting approximately 4,000 acres of public lands in the planning area.

The majority of rights-of-way are granted for access roads, pipelines, and electrical distribution lines associated with oil and gas wells and production facilities. These rights-of-way may be temporary (six months to two years) for wells which are dry holes or used for an extended period (more than two years) when wells produce oil or gas.

The number of rights-of-way granted averages from 10 to 15 per year and may fluctuate depending on the level of oil and gas activities in the area.

Rights-of-way are located next to existing facilities whenever possible; common use is required whenever feasible. Utility corridors have not been designated because of the scattered public land pattern in the Newcastle Resource Area. Only existing utility and transportation rights-of-way have the potential to decrease the need for new rights-of-way routes; for example, power lines or buried telephone cables that use existing road rights-of-way.

Outside Influences

The lands program is strongly influenced by the activities of private landowners, oil and gas operators,

and utility companies due to the scattered pattern of public lands within the planning area. The majority of land use authorization and disposals will continue to be influenced by projects which originate on lands other than BLM-administered public lands.

Classifications and Withdrawals

Classification and withdrawals in the planning area are listed in table 3-7. Classifications and withdrawals are used to protect resource values or to restrict land use authorizations or mineral entry (map 3-9).

LIVESTOCK GRAZING

There are 312 ranch operators that graze livestock on the public land in the NRA. These ranchers generally have a low percentage of public land in their total operation. Many have 5,000- to 10,000-acre ranches with scattered 40- to 80-acre tracts of public land. Only 65 operators have leases containing more than 1,000 acres of public land.

Approximately 282,000 acres of public land and 48,000 AUMs are leased for livestock grazing (table 3-8). An AUM equals about 800 pounds of dry forage. Carrying capacities for livestock average about 6 acres per AUM.

Lease periods vary in the NRA; however, some ten-year grazing leases are being issued. As on-the-ground monitoring of ranch units obtain information on kinds and numbers of livestock and seasons of use, more ten-year leases will be issued. Exceptions to this procedure will be made when private leased land is involved. In such cases, the term of the federal lease will match the private lease term.

Cow-calf operations are the norm in the NRA, but there are some sheep and yearling cattle operations. Generally, the season-of-use varies from year-long to five to six months (mid-May through October) in all counties.

Rangeland conditions are generally good (table 3-8). Livestock forage use is basically uniform, but situations exist where livestock distribution, and thus use could be improved. This situation exists where livestock waters are insufficient, especially in rough terrain.

Recent evaluations indicate the trend in range conditions to be static or improving. This conclusion is based on professional observation, consultation with Natural Resources Conservation Service (NRCS) (formerly the Soil Conservation Service) personnel and local ranchers, use of current NRCS range site guides, and Phase I watershed studies. The Phase I watershed studies gathered basic data for soils, vegetation, and erosion on about 87,000 acres in Niobrara County in 1978.

TABLE 3-7
CLASSIFICATIONS AND WITHDRAWALS IN THE PLANNING AREA

Classification or Withdrawal	County	Type of Segregation	Acreage	Surface Management		Review Status	Comments
				Agency	Agency		
Coal classification GLO O 05/04/1909 ^a	Weston	none	11,520	BLM, private, state		pending	designated lands valuable for coal, but did not segregate against surface disposal
Coal classification GLO O 05/15/1909	Weston	none	7,040	BLM, private, state		pending	designated lands valuable for coal, but did not segregate against surface disposal
Coal classification GLO O 11/14/1913	Niobrara Weston	none	960 92,160	BLM, FS ^b , state		pending private	designated lands valuable for coal, but did not segregate against surface disposal
Coal classification GLO O 05/12/1911	Niobrara Weston	none	5,120 92,160	Private		pending	designated lands valuable for coal, but did not segregate against surface disposal
Coal classification GLO O 11/04/1913	Niobrara	none	7,680	BLM, private, state			designated lands valuable for coal, but did not segregate against surface disposal
Coal land classification BLM O 07/15/1964	Crook	none	920	Private		pending	designated lands valuable for coal; surface disposal completed prior to classification
Power site classification No. 375, Belle Fourche River SO ^d 08/25/1945; W92933	Crook	location, sale, or entry	437	BLM, BOR ^c		pending	subject to valid existing rights. Any actions on these lands are subject to this classification
Coal classification SO 10/10/1906	Crook	none	46,080	BLM, FS, private, state, Air Force		pending	designated lands valuable for coal, but did not segregate against surface disposal
Coal classification SO 10/15/1906	Crook	none	23,040	BLM, private, state		pending	designated lands valuable for coal but did not segregate against surface disposal

TABLE 3-7 (continued)
CLASSIFICATIONS AND WITHDRAWALS IN THE PLANNING AREA

Classification or Withdrawal	County	Type of Segregation	Acreage	Surface Management Agency	Review Status	Comments
Withdrawal Executive Order 6441 11/21/1933	Crook	settlement, location, sale, or entry	715	FS	pending	For classification and in aid of legislation*
Withdrawal Executive Order 7616 05/13/1937	Crook Weston	settlement, location, sale, or entry. Open to mineral entry	320 85,249	FS	N/A	Thunder Basin National Grassland*
Withdrawal	Crook	settlement, location, sale, or entry. Open to mineral entry	165,994	FS	N/A	Black Hills National Forest*
Withdrawal SO 03/10/1949 W17424	Crook	location, sale, or entry. Open to mineral leasing	637	BOR	reviewed in 1988; recommended for continuation	Keyhole Reservoir
Withdrawal Executive Order 10046	Weston Niobrara	none	142,218 840	FS	N/A	Thunder Basin National Grassland*
Withdrawal Public Law 622 01/15/1927	Weston Crook	none	6,499 2,226	FS	N/A	Black Hills National Forest*

* General Land Office order of...

^b Forest Service

^c Bureau of Reclamation

^d Secretarial Order

* BLM responsible for mineral leasing only.

TABLE 3-8

"I" AND "M" CATEGORY ALLOTMENTS MONITORED AS OF SEPTEMBER 1989

Operator Number	Operator Name	Allotment Number	BLM Acreage	State Acreage	Private Acreage	Total Acreage	Amount of Live-stock	Kind of Live-stock ^a	AUMs	Percent Federal Range	Acreage per AUM	Range Condition of PublicLand			Season of Use ^b
												Excel-lent	Good	Fair	
"I" CATEGORY ALLOTMENTS															
49-8220	Busenitz, M.A.	04207	3,100	160	6,040	9,300	30	C	360	33.0	8.61		2,860	240	YL
49-8342	McDonald, J.O.	04319	1,026		3,929	4,955	15	C	187	21.0	5.49		106	920	YL
49-8385	Battle Creek Ranch	04360	4,727	1,920	9,465	16,122	37 541	C	437	29.0	10.84	680	3,934 3,937	120	YL Sp/Su/F
49-8412	Bush, F.A., Inc.	04387	4,501				864								Sp/Su/F
49-8045	Bush, F.A., Inc.	04039	5,323	2,880	13,840	26,544	117	C	1,405	37.0	6.00		8,204	1,620	Sp/Su/F
"M" CATEGORY ALLOTMENTS															
49-8001	Ackerman, D.	04000	2,772	640	4,571	7,983	33	C	394	35.0	7.03		1,812	960	YL
49-8010	Baker, Paul L.	14010 14009	1,360 441		7,519 1,322	8,878 1,762	9 18	C C	108 215	15.6	5.05			1,801	YL YL
49-8012	Baldwin, D.	14011	3,664	2,240	10,538	16,442	50	C	602	22.0	6.00	80	2,704	880	YL
49-8013	LS&J Livestock	14012	4,552	1,920	7,760	14,232	76	C	908	32.0	4.57		80	4,472	YL
49-8022	Hamilton's, Inc.	04041	3,414	640	6,600	10,654	72 71	C C	144 428	8.0	7.90		3,414		Sp Sp
49-8046	Reisland, W.	04040	5,328	1,520	9,280	16,128	60	C	724	33.0	7.36		3,488	1,840	YL
49-8048	Bush, R.D.	04042	4,172	640	4,920	9,732	54	C	642	43.0	6.50		3,352	820	YL
49-8050	Stoddard, R.	04044 04043	2,826 280	640	10,170	13,916	250	C	620	22.0	5.00		2,800	306	Sp/Su/F Sp/Su/F
49-8057	Christensen, C.	04051	2,491		6,754	9,245	85	C, S	354	26.0	7.00		2,941		YL
49-8058	Christensen, C.	04052	600	640	3,940	5,180	31	C, S	91	11.0	6.59			600	YL
49-8068	Darrow, G.	04062	1,480				12	C							YL
49-8069	Darrow, G.	04063	2,092	2,206	6,900	12,678	25	C	448	12.7	7.90		3,572		YL

Operator Number	Operator Name	Allotment Number	BLM Acreage	State Acreage	Private Acreage	Total Acreage	Amount of Livestock	Kind of Livestock ^a	AUMs	Percent Federal Range	Acreage per AUM	Range Condition of Public Land			Season of Use ^b
												Excellent	Good	Fair	
49-8080	Dixon, C.R.	04073	2,499		11,200	13,699	36	C	436	19.0	5.70		1,898	601	YL
49-8081	Dixon, H.B.	04074	3,355	640	2,640	6,634	177	C	619	50.2	5.40		1,995	6,360	Sp/Su
49-8084	Dorsett, F.	04077	1,286		1,578	2,864	20	C	138	45.0	9.30			6,286	Sp/Su/F
49-8094	Stoddard, R.	04087	2,065	3,783	22,340	38,590	140	C	1,673	32.0	6.17	160	10,747	1,560	YL
		04086	10,401				29	C	345						YL
49-8097	Foster, C.	04090	1,400		1,960	3,360	84	C, S	176	42.0	7.80		1,400		Sp/Su/F
49-8145	HKC Ranch, Inc.	04135	1,000		1,560	2,560	20	H	99	39.0	10.00		1,000		Sp/Su/F
49-8150	J&J, Inc.	04148	1,320	640	3,940	5,900	18	C	220	22.4	6.00		1,040	280	YL
49-8167	Joss Ranches, Inc.	04157	8,476	21,758	20,000	50,234	109	C	1,309	17.0	6.0		8,476		YL
49-8181	Schlosser, J.C.	04170	4,375				25	C	816						YL
49-8257	Schlosser, J.C.	04238	2,320	1,290	12,675	20,660	35	S	1,260	32.0	5.50		6,355	360	YL
49-8186	Middleton, B.	04175	2,189	1,280	9,508	12,977	24	C	292	16.0	4.38		2,189		YL
49-8221	Crow Creek Ranch	04208	364		13,817	14,181	11	C	61	2.0	5.96		14,181		Sp/Su/F
49-8223	Moore, C.M.	04210	1,637	1,280	7,200	10,117	41	C	225	19.0	7.20		1,636		Sp/Su/F
49-8242	Ondriezek, J.	04228	1,318		4,871	6,199	17	C	200	21.0	6.59		1,198	120	YL
49-8258	Pierce, V.	04244	1,476		3,440	4,916	15	C	182	30.0	8.11		1,156	320	YL
49-8261	Stoddard Ranches	04084	1,606	640 843	5,250	6,856	15	C	60						W Sp Sp
		04249	640		7,822	9,102	31	C	109						
		04247	3,149		5,668	9,660	128	C	518						
	Total (49-8261)		5,395	1,483	18,740	25,618			848	21.0	6.36		5,395		
49-8265	Putnam, L.	04254	1,440		3,721	5,161	14	C	178	28.0	8.09		1,440		YL
49-8269	Quest, H.	04258	1,363		2,602	3,965	32	C	384	3.0	3.50		1,363		YL
49-8279	Jackson, K.	04268	1,480	960	13,768	16,208	25	C	306	9.0	4.83		760	720	YL
49-8293	Robison, J.	04278	574		1,797	2,371	7	C	87	11.6	6.60		574		YL
49-8295	Rocky Point Grazing	04280	7,628	1,643	19,062	28,333	613	C, S	2,590	27.0	2.95	160	6,428	1,040	Sp/Su/F
49-8296	Porter, F.	04281	760		4,840	5,600	12	C	142	14.0	5.30	160	560	40	YL

Operator Number	Operator Name	Allotment Number	BLM Acreage	State Acreage	Private Acreage	Total Acreage	Amount of Live-stock	Kind of Live-stock ^a	AUMs	Percent Federal Range	Acreage per AUM	Range Condition of Public Land			Season of Use ^b
												Excel-lent	Good	Fair	
49-8303	Schmidt, H.	04288	5,075		12,640	17,715	79	C	949	28.6	5.35		4,715	360	YL
49-8304	Schmidt, H.	04289	1,266		4,867	6,093	21	C	254	20.1	4.83		200	1,026	YL
49-8310	Sears, J.	04293	2,134	1,680	9,360	13,174	35	C	430	16.0	4.70		2,054	80	YL
49-8311	Slagle, E.A.	04294	1,120	880	3,720	5,720	22	C	266	20.0	5.00		1,120		YL
49-8620	Slagle, E. A.	04303 04302	1,106 2,360	1,560	6,240 12,460	23,726	43 19	C C	520 229	18.0	4.62		3,466		YL YL
49-8351	Bruegger, S.	04328	5,236	1,680	19,747	25,163	209	C, S	777	19.5	5.80		240	2,835	YL
49-8361	True Ranches	04337	7,060	2,880	25,880	35,820	73	C	879	19.7	8.03	80	6,060	620	YL
49-8179	Flores, A.D.	04168	2,759				28	C	335						YL
49-8381	Krust, W.T.	04356	2,792	1,280	13,360	20,191	42	C	507	27.5	6.90		5,551		YL
49-8382	Todd Ranches, Inc.	04357	560		2,040	2,600	38	C	150	22.0	3.70		560		Su/F
49-8399	Zerbst, W.	04374	4,216	1,360	6,640	12,216	51	C	615	34.5	6.85		3,576	640	YL
49-8403	Slattery, J.	04378	720		360	1,080	23	C	148	6.6	4.80		720		Sp/Su/F
49-8421	McGuire, W.G.	04396	4,793		7,643	12,436	324	C, S	660	38.5	7.26		4,793		Sp/Su/F
49-8435	Simon, M.	04409	1,228		1,120	2,348	43	C	214	52.0	5.73		1,228		Sp/Su/F
49-8047	Simon, M.	04119	840		4,110	4,950	25	C	159	16.0	5.28		840		Sp/Su/F
49-8154	Simon, M.	04144	603		3,200	3,803	11	C	68	15.0	8.86		603		Sp/Su/F

^aC = cattle
S = sheep
H = horse

^bYL = yearlong
Su = summer
W = winter
Sp = spring
F = fall

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The predominant vegetation type in the NRA is sagebrush grasslands. However, the vegetation ranges from sparse saltbush and grass on shaley soils of the plains to timbered areas of juniper and pine occurring on ridges and in rougher areas.

RECREATION RESOURCES

Recreation activities on public land in the resource area are unstructured and dispersed in nature. There are no developed recreation sites in the resource area. The main recreational activity is hunting, primarily for

mule deer and pronghorn antelope. Hunt areas for deer, antelope, and elk are shown on maps 3-10, 3-11, and 3-12. The demand for recreational shooting of prairie dogs has increased substantially in the past five years. Large scale poisoning projects have occurred both on private land and other federal land in the region. In 1992, prairie dogs occurred on approximately 3,300 acres of public land in the resource area (table 3-9). Varmint shooters from as far away as Michigan, Iowa, and California come to the area to hunt the animals. The main factor limiting this activity in the past has been public access.

TABLE 3-9
ACREAGE OF PRAIRIE DOG TOWNS ON PUBLIC LANDS IN 1982 AND 1992

	Crook County	Weston County	Niobrara County	Total
Number of towns	16	8	42	66
Acres on BLM-administered lands				
1982	1,108	323	1,186	2,617
1992	730	466	2,156	3,352
Average size of town (acres)	140	184	138	—

Demand for access to public lands for hiking, horseback riding, cross country skiing, and mountain biking is increasing in the resource area. Mountain bike trails crossing public land have been identified in at least two publications. Opportunities exist to develop existing trails with minimal cost or begin new construction. In most cases existing roads and trails are the preferred routes and only require marking and periodic maintenance. Trails are often used for multiple activities. Hiking, bicycling, horseback riding and cross country skiing often use the same trails.

Marking and maintenance of trails for these activities is recommended for two areas on public land in Weston County (Elk Mountain, T. 43 N., R. 60 W., and Summit Ridge, T. 44-45 N., R. 60 W.). Other opportunities for trail designation will be explored in the remainder of the resource area.

Additional recreational use of public land is made through sightseeing, camping (generally associated with hunting), photography, and other casual use such as rock-hounding.

A limited number of professional hunting outfitters have recreational use permits for public land in the resource area. Demand is not high for these activities

but is increasing as the popularity of private landowners leasing hunting rights on their land to outfitters increases. Outfitters must obtain a permit to conduct outfitting and guiding activities, since much of the available public land is within established private ranches. Currently, the demand is not high enough to assign use areas to outfitters. However, if demand increases to the level that competition between outfitters warrants, assignments will be made. These assignments in no way affect the public use of these lands for any legal activity.

The main emphasis in the recreation program will be on the acquisition of access to existing public land with higher recreation potential through exchanges or purchases of access agreements. Of the public land in the resource area, 60% has legal access; however, only 38% has practical vehicle access. Map 3-13 shows areas of greatest concern where additional access would benefit the public.

To avoid conflicts with adjacent landowners, boundary identification is needed to assist the public in locating the division between public and private land. The scattered nature of public lands in this area makes the potential for this type of conflict high.

ORV Use and Designations

ORV use designations are required for all public lands covered by this management plan. The purpose of these designations is to protect identified resource values and at the same time to allow public use. Three categories of designations are available: open for all ORV uses and activities, closed to all ORV uses and activities, and limited uses and activities by ORVs. For more information on ORV designations, please see the Glossary.

Due to the nature of existing uses in the resource area and the scattered land pattern that exists, all public land in the resource area (291,168 acres) is limited to existing roads and trails. Under this designation, vehicle use on public lands is restricted to roads and trails that existed on the public lands as of January 1, 1991. This designation was established to manage ORV use in the absence of formal ORV designations. The BLM retains the authority to authorize the construction of new roads or trails to accomplish program goals and for administrative use.

Vehicle travel off existing roads and trails can be authorized to accomplish necessary tasks if such travel does not result in resource damage or encourage additional use on a regular basis. Random off-road travel and creating new roads or trails not specifically authorized by the BLM is not permitted.

SOCIOECONOMICS

Characteristics

The planning area has been historically rural in character and sparse in population with agriculture occupying an important part of the area's development. This importance has diminished as mineral resources, first coal, then oil and gas, have exceeded agriculture as base industries dominating the economics of the region. Oil development and production in the planning area suffered a significant downturn after 1985, which is reflected in the economic data. There has been some recovery as the economy has adjusted to a lower level of economic activity in oil. Agriculture had suffered a decline at about the same time but has recovered to some degree. The planning area is also a community with positive indicators of well-being.

Population

Fifty-one percent of the planning area's population reside in towns of 760 or more people, while the remain-

ing 49% live in small communities (USBC 1991). Lusk, Newcastle, and Sundance make up about 39% of the planning area's population and constitute the county seats and local trade centers for Niobrara, Weston, and Crook counties, respectively. From 1980 through 1986, the planning area population increased 6.4% compared to 5.6% for the state during the same timeframe (WDAI 1993). From 1986 through 1990, the planning area's population plummeted 12.3%, compared to the state's 8.5% decline (table 3-10). Most of the decrease can be attributed to an economic downturn in the oil industry which cut employment in 1985 and oil production in 1986 as oil prices declined.

As seen in table 3-10, the planning area's population is expected to decline by 2.3% from 1990 through 1998, based on 1990 census data, while the state is expected to grow 4.3% during the same timeframe.

Healthcare

There are 3 county hospitals, each of which is located in a respective county seat, with a total bed capacity of 60 beds and an average occupancy rate of 24% (WDHSS 1989/90). There are also 3 clinics, a nursing service, 3 nursing homes, and a retirement home (WDHSS 1989/90). In 1989, there were 7 full-time physicians, 15 part-time doctors, and 3 physicians' assistants (Alexander, Mahoney, and Sharp 1989). Most of the part-time doctors are specialists such as cardiologists, urologists, neurologists, and orthopedists who come into one or more of the communities biweekly or bimonthly. In 1989, there were also 4 full-time dentists and 1 part-time dentist in the area. There are 7 ambulances available and about 34 emergency medical technicians in the area.

Economic Growth and Activity

Sales revenue, labor force size, and employment comparisons over time can provide a valuable indication of economic growth and activity.

Sales Subject to Sales and Use Taxes

As can be seen in table 3-11 below, in fiscal year 1990, sales of goods and services amounted to an estimated \$89 million within the planning area, down 16% from 1986 levels and 3% less than 1980 (WDAFC 1990). While this information is reported by sector, it excludes sales not subject to state sales tax, so it does not reliably indicate the total revenues of individual

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sectors. Trade, subject to sales tax, declined more than \$2.7 million (almost 3%) from 1980 to 1990, and almost \$17 million (16%) between 1986 and 1990 (WDAFC 1990).

Labor Force and Employment

In 1980, the planning area had an average labor force of 6,871 people, or 3% of the state's total (WESC 1989). It increased nearly 21% between 1980 and 1986, outpacing the state's 7% increase. There was a subsequent 7.6% decline by 1988 as the oil and gas industry weakened. This labor force decline closely paralleled

the state's 8% fall during the same timeframe (table 3-12).

In 1988, employment within the planning area averaged 4,491 people, down 4% from the 1986 levels, and closely paralleling the state's 5% 1986-1988 decline. Between 1980 and 1986, employment in the planning area also decreased but at a much slower rate (less than 1%) compared to the states employment decline of 7.6% (WESC 1981, 1987; table 3-14). Employment was expected to increase by 4.6% in the planning area and 2% in the state from 1988 through 1992, and by another 9% in the area compared to a 3.6% increase anticipated by the state (table 3-13).

TABLE 3-10
BASELINE AND PROJECTED POPULATION GROWTH FOR SELECTED YEARS

Year	Wyoming Population	Crook County	Niobrara County	Weston County	Planning Area
1980	469,557	5,308	2,924	7,106	15,338
1986	495,659	5,737	2,997	7,593	16,327
1990	453,588	5,353	2,537	6,676	14,566
1992	466,190	5,370	2,460	6,610	14,440
1998	472,880	5,390	2,410	6,390	14,190

Source: WDAI 1993.

TABLE 3-11
ESTIMATED SALES WITHIN THE PLANNING AREA
FOR SELECTED YEARS
(\$1000)

Sector	1980	1986	1990
Agriculture and agricultural services	265	179	266
Minerals, including oil and gas	12,980	10,802	7,876
Construction	2,629	3,453	2,051
Manufacturing	3,483	4,678	1,303
Transportation	9,414	18,074	17,087
Wholesale trade	3,805	4,980	2,360
Retail Trade	42,455	47,018	43,719
Finance	2	3	0
Services	7,398	8,389	7,612
Public administration	9,325	8,455	6,777
Total	\$91,756	\$106,032	\$89,050

Source: WDAFC 1990 fiscal year data.

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TABLE 3-12
AVERAGE LABOR FORCE FOR
SELECTED YEARS

Year	Wyoming Labor Force	Planning Area Labor Force
1980	235,000	6,871
1986	252,000	8,292
1988	232,000	7,664

Source: WESC 1989.

TABLE 3-13
AVERAGE ANNUAL EMPLOYMENT WITH
TRENDS TO 1998

Year	Wyoming Employment	Planning Area Employment
1980	197,514	4,722
1986	182,583	4,690
1988	173,464	4,491
1992	177,280	4,696
1998	183,660	5,120

Source: WESC 1981, 1987; WDE 1990.

Note: Projections based on average percentage changes shown in Furtney 1988.

Personal Income

Personal income is based on annual employee wages and proprietors income at the workplace. These earnings are reduced by contributions for social insurance; adjusted by employee residency; and increased by dividends, interest, rent income, and transfer payments (usually made by governments and business to individuals and nonprofit institutions.) This results in the total personal income by place of residence.

Between 1980 and 1986, total personal income (TPI) within the planning area increased 24%; it further increased by almost 10% between 1986 and 1988 (table 3-14). At the state level, personal income increased 20% between 1980 and 1986, and further increased 2% between 1986 and 1988. In 1980, minerals production at the state level made up the largest nonfarm industrial sector, as minerals did within the planning area, accounting for 24% and 21%, respectively, of total earnings, followed by public administration (16% and 15%,

respectively), and construction (13% and 10.6%, respectively) (WDAFC 1990a). The most significant difference between economic sectors at the state and planning area levels was in the farm sector, which contributed only 3% to the state, but over 13% to the planning area. This places it as the third leading sector in the planning area when included with the nonfarm sectors. By 1986, public administration had taken the lead at both the state and planning area levels making it the largest payroll sector, followed by minerals, services, then transportation and utilities at the state level, with services following transportation and utilities at the planning area level. As an indication of the volatility in farming, this sector contributed only 1% to the state level and 3% to the planning area level in 1986 (WDAFC 1990a). By 1988, public administration, with 25% of the total earnings, continued to grow at the state level but decreased slightly over the 1986 level as a percent of total earnings within the planning area (23% compared to 23.2% in 1986). Minerals were second in importance in total earnings followed by services, then transportation and utilities for the state, with the planning area following suit except that transportation and utilities were third in nonfarm industrial earnings, followed by services (WDAFC 1990a). The farm sector contributed 2% of the state's earnings and 13% of the planning area earnings in 1988 (WDAFC 1990a). For the planning area, minerals, primarily oil and gas, led the earnings sectors in 1980, then fell to second in 1986 and third in 1988. Public administration was second in 1980, then led the sectors in both 1986 and 1988. Agriculture was third in 1980, the eighth in 1986, and the second in 1988.

Per capita earned income for the state was \$11,339 in 1980, with \$9,839 for Crook County, \$10,595 for Niobrara County, and \$10,826 for Weston County (WDAFC 1990a). In 1986, per capita earned income had increased to \$12,726 for the state and \$12,031, \$12,001, and \$11,441 for Crook, Niobrara, and Weston counties, respectively (WDAFC 1990a). By 1988, this had increased further, with \$13,720 for the state, and \$13,775 for Crook, \$13,217 for Niobrara, and \$13,917 for Weston counties (WDAFC 1990a). This indicates that earnings in the planning area in 1988 approximate that of the rest of the state, on a per capita basis.

Property Values and Local Taxes

Assessed property values affect the level of tax revenues available for local governments. Tax computations are made using difference bases for different types of property. For example, prior to 1990 real property was based on 25% of 1967 replacement cost. Beginning January 1, 1990, it has been based on 9.5% of fair market value. On the other hand, mineral produc-

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TABLE 3-14
PERSONAL INCOME BY MAJOR SOURCE FOR SELECTED YEARS
(\$000)

Item	1980		1986		1988	
	Wyoming	Planning Area	Wyoming	Planning Area	Wyoming	Planning Area
Industrial Earnings						
Farm	133,423	14,876	54,133	4,240	98,013	17,450
Nonfarm						
Agricultural services	18,195	492	18,635	526	26,129	911
Minerals	1,055,113	23,138	826,211	20,466	777,716	17,345 ^b
Construction	568,344	11,757	513,089	9,667	351,458	8,520 ^b
Manufacturing	201,787	8,145	199,714	9,705 ^c	228,014	11,911 ^b
Transportation/Utilities	434,352	10,061	513,594	17,278	527,067	14,277
Wholesale trade	198,988	2,047	204,024	1,988	179,206	1,983
Retail trade	412,712	10,285	442,477	11,283	441,665	10,683
F.I.R.E. ^d	136,604	2,943	174,483	3,262	177,019	3,456
Services	567,451	10,998	702,268	13,074	769,946	11,911
Public administration	705,769	16,462	1,162,781	27,611	1,186,839	29,898
Total earnings	4,432,738	111,204	4,811,409	119,125	4,763,122	130,130
Adjustments						
Less contrib. for soc. insur.	181,509	4,045	251,192	6,004	282,983	6,222
Adjust. for residence ^a	(74,175)	8,977	(78,903)	9,489	(56,777)	10,003
Net Earnings	4,177,054	116,136	4,481,314	122,610	4,423,362	133,911
Add dividends/interest/rent	738,624	30,215	1,100,121	49,345	1,209,465	54,391
Add transfer payments	466,089	15,260	872,259	28,605	946,364	31,938
Total personal income^e	5,381,767	161,611	6,453,694	200,560	6,579,191	220,240

^a Income of residents commuting outside the United States.

^b Mining construction, manufacturing for Niobrara County not shown to avoid disclosure of confidential information; estimates are included in totals.

^c Manufacturing income for Niobrara County less than \$50,000 is included in totals; hence, the total will not add to \$114,885 in nonfarm earnings.

^d Fire, insurance, and real estate.

^e Current income of residents after deductions but before personal tax deductions are made.

Source: WDAFC 1990a.

tion has always been based on actual revenue from the sale of the product at the point it leaves the mine or well. The mill levy for the location is then applied to determine the tax due.

In the state's fiscal year of 1989, the total assessed property value of the planning area including real property, minerals, utilities, and personal property amounted to \$174.3 million or 3% of the state total (WDEdu. 1990). This is a decline of 43% in total property value from fiscal year 1986 levels (WDEdu. 1987). The main reason for this fall was mineral production, which sustained a 53% drop in assessed valuation during this timeframe, fol-

lowed by a 30.6% decline in personal property values. Between 1981 and 1986, however, total property valuations increased 23.6%, led by mineral production and utilities valuation increases of nearly 30% and 30.6%, respectively (table 3-15). As a result of the decreased valuation, total taxes assessed by the counties in the planning area declined from \$19.6 million in 1986 to \$12.9 million in 1988, or 34.6% (WDRT 1986, 1988). Impacts to the individual counties varied but were significant in all cases. Crook County declined from \$10.1 million to \$6.5 million, or \$3.6 million (35.6%). Weston County declined from \$6.6 million to \$4.1

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million, or \$2.5 million (37.9%). Niobrara County declined from \$2.9 million to \$2.3 million, or \$.6 million (20.7%) (WDRT 1986, 1988).

In 1987, the average value of a farm (including buildings) in the planning area amounted to \$468,354, or nearly 88% of the state average figure (USBC 1989). In contrast, in 1982 the average value per farm was \$620,947, or almost 85% of the state average (USBC 1989). This indicates a 24.6% decline in value over the five-year period. In 1987, the county within the planning area with the highest value per farm (including buildings) was Weston County; the least was Crook County.

Payment in lieu of taxes (PILT) are payments made to the counties by the federal government to compensate for the nontax status of federal lands present in the county. PILT is determined by statute and cannot exceed a ceiling based on county population.

The values shown in table 3-16 represent the amount received per acre for PILT and what the acreage would have generated for taxes had it been in private ownership. Figures used are those actually received by the counties in 1990.

TABLE 3-15
PROPERTY VALUATIONS
(\$000)

Year	Wyoming Total Valuation	Planning Area				Total Valuation
		Real Property	Mineral Production	Utilities	Personal Property	
1981	6,176,291	42,079	174,046	14,258	17,473	247,856
1986	7,830,715	41,422	225,827	18,624	20,502	306,375
1989	5,729,687	39,852	106,140	14,062	14,227	174,281

Source: WDEdu. 1981, 1987, and 1990.

TABLE 3-16
COMPARISON OF PAYMENT IN LIEU OF TAXES (PILT)
AND COUNTY TAX LEVY FOR AVERAGE AGRICULTURAL LAND

Tax per Acre	County	1980	1986	1989	1990
PILT/County Levy ^a	Crook	\$.41/.20	\$.31/.21	\$.36/.22	\$.21/.15
PILT/County Levy ^a	Niobrara	\$.68/.36	\$.72/.23	\$.75/.25	\$.75/.15
PILT/County Levy ^a	Weston	\$.45/.22	\$.37/.20	\$.39/.21	\$.10/.13

^a PILT cannot exceed a statutory ceiling based on county populations. These amounts are reduced above to a per-acre value based on a representative public land figure for each county from the Wyoming Data Handbook (WDAFC 1989). County tax is based on production per acre. These are middle/average range figures for livestock grazing lands.

SOURCE: Connally, G., J. Fassbender, and J. Hales 1993.

Lands, if in private ownership, are classified into one of many categories for tax purposes. Nearly all BLM-administered public land in Crook, Niobrara, and Weston counties is grazing land; therefore, the values used to represent grazing lands categorized is an "average" of the classifications available for lands used primarily for livestock grazing.

The counties, with the recent exception of Weston County, receive greater revenues from PILT for land in federal ownership than from property taxes if the land were in private ownership. Niobrara County receives the greatest benefit from this difference.

The figures in table 3-16 do not include income generated from the funds returned from public land

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grazing fees or the effect on the economy as the dollars from either the PILT or the taxes cycle through the economy. It also does not include the return to the state of 50% of royalties paid on federal minerals and a portion of receipts from federal timber sales.

Major Economic Bases Within the Planning Area

Agriculture

The most recent detailed agricultural data are for the years 1987 and 1982. In 1987, 87% of the planning area was being used as farm lands (including grazing lands), up nearly 1% from 1982 (USBC 1989; WDAFC 1989). During this period farm numbers increased 5.4%; however, the average size of farms decreased 3.6% or 184 acres per farm. This is evidenced mainly by the nearly 22% increase of small operations (1 to 499 acres) throughout the planning area. Medium-sized enterprises (500 to 999 acres) decreased 5% during the period, while larger operations (1,000 acres or more) showed a 2% increase (USBC 1989).

Farming as a principle occupation also declined slightly (2.4%) during this period, while those engaged in other occupations increased 32% (USBC 1989). State trends appeared to mirror this direction, with a 6.4% increase noted for those engaged in other occupations between 1982 and 1987, while those engaged in agriculture increased only 2.6% (USBC 1989). Agriculture employed 1,286 individuals (15%) in the planning area in 1988.

Between 1982 and 1987, total agricultural sales in the planning area increased nearly 6% to \$68.9 million based mainly on Crook County's increase in agriculture sales of 38.3% (USBC 1989). Despite these increases, average per farm sales suffered a 4.2% decline, due mostly to Weston and Niobrara counties' decline in sales per farm of 15.5% and 1.5%, respectively, offsetting Crook County's 32.6% increase (USBC 1989). Sales of cattle and calves represented 89.2% of the planning area's agricultural sales in 1982, and 87.1% in 1987 (USBC 1989).

BLM-administered grazing lands make up about 7% of all pastureland and woodland grazed in the planning area, and they supply 48,818 AUMs for grazing (USBC 1989). Livestock operators using BLM-administered lands make up about 30.4% of total operators in the planning area and about 10% of total Wyoming operators with Taylor grazing leases (USBC 1989).

Domestic livestock grazing on BLM-administered public lands make up 3% of the total cattle and calves,

1.5% of all sheep, and nearly 4% of all horses within the planning area (USBC 1989).

Livestock graze on BLM-administered public lands in the planning area an average of five months per year. These lands bring in \$65,904 in revenues to the federal government based on \$1.35 (at the time of this writing) per AUM cost figure.

Minerals

Mineral development and production employed at least 930 individuals (approximately 11%) in the planning area in 1988. This is primarily due to oil and gas but includes other mineral producers.

Petroleum production is a significant industrial activity in the planning area. In 1986, the area produced 7.8 million barrels of oil representing 7% of the total state production (WDC 1991). About 40% of this oil (3.1 million barrels) came from lands with jurisdictional production (federal minerals/federal units/federal interest) (WOGCC 1986). This total production had an assessed valuation of \$100.8 million with BLM interests responsible for \$40.3 million of this total (WOGCC 1986; WDC 1991). In 1989, oil production totaled nearly 6.9 million barrels with about 54% coming from lands with some jurisdictional production (WOGCC 1989). This oil had an assessed valuation of \$113.0 million with BLM interests responsible for an estimated \$64.9 million of this total (WOGCC 1989; WDC 1990). However significant, production of oil continues on a downward slide in the area, signaling an almost certain decline in the importance of petroleum within the region.

Gas production in 1986 made up nearly 0.6% of the state's total production (WOGCC 1986; WDC 1991). This gas had an assessed valuation of \$4.4 million (WOGCC 1986; WDC 1990). In 1989, production was even less, making up 0.4% of the state's total production, with about 67% coming off lands that have some federal investment. This amounts to an assessed valuation of \$3.8 million with an estimated \$2.5 million coming from BLM interests (WOGCC 1989; WDC 1990).

Bentonite is produced in the area with some 23,343 tons extracted from leased public lands in fiscal year 1990. In 1986, the planning area produced 71% of the state's total production, with an assessed valuation of \$4.8 million (WDC 1990). In 1987, this production was estimated to be 75.7% of the state total, with an assessed valuation of \$6.6 million (WDC 1990). In 1989, production slipped to 47% of the state's total, but with a higher assessed valuation of \$5.5 million due to higher per-unit valuations (WOSIM 1990; WDC 1991). Public lands accounted for about 1% of the total bentonite production in the planning area, and this production had

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an assessed valuation of about \$55,497. Long-range prospects for bentonite production appear good; however, its fortunes are basically tied to the oil and gas industry (WDC 1991).

Limestone is also produced in the planning area. In 1986, 45,039 tons were removed from public lands; in 1988, 62,000 tons were removed; in 1989, 26,648 tons were removed; and in 1990, 130,376 tons were removed. The appraised value of this production is \$.25 per ton, making 1990 production values at \$32,594 from the public lands, insignificant to the planning area's economy. About 13 people are employed at various quarries in the planning area mining limestone from all sources (WOSIM 1990). Also, some sand, gravel, and shale are produced, but much of the material requirements are being produced from sources other than BLM (see the "Minerals" section).

Forestry

There is an estimated 41.5 mmbf of timber cut in the planning area each year; however, only about 500 mbf is cut from BLM-administered public lands. This volume represents 1.4% of the estimated total levels taken from the planning unit, and has a value of approximately \$135,222 based on \$225.37 per mbf (log scale price) (Adams 1989). About 5.9 direct and indirect jobs could be involved from this volume of timber produced and marketed. This would contribute an estimated \$270,174 in direct and indirect revenues to the economy based on a 1.999 business multiplier supplied by Colorado State University. This timber would probably be processed in line with other timber with no change in work force except under conditions of very high demand, tight work schedules, and a minimum work force on line.

There are about 1,500 poles and posts plus about 4.75 mmbf of firewood harvested from the planning area each year. Posts, poles, and firewood harvested off public lands are of small quantities and are on a demand basis.

Recreation

The planning area contains several recreational opportunities, attracting people from both inside and outside the region. In the north, Sand Creek, Cook Lake, and Keyhole State Park provide fishing throughout much of the year. The latter two areas are also popular boating spots. Camping facilities are available at Keyhole State Park, Cook Lake, and Devils Tower National Monument. In 1986, Keyhole State Park recorded 584,679 visitor days; in 1988, this number had fallen to 494,624 representing a value of \$14.9 million. This figure is based on

the University of Wyoming averaged variable costs of \$30.11 per visitor day expenditures for both resident and nonresident tourists. At Devils Tower National Monument, in 1986, some 298,148 visitations were recorded, increasing to 347,451 in 1988.

Further south, LAK Lake and MW Reservoir are favorite fishing spots for sportsmen. In 1989, hunting and fishing in the planning area resulted in the creation of nearly \$11 million in income, most of which remained in Wyoming (table 3-17). The public lands administered by the BLM provided an estimated 3% of the total (WGFD 1990).

Additional recreational opportunities such as sightseeing and self-guided tours to many of the natural sights of the area including the Bear Lodge Mountains and the Thunder Basin National Grasslands are available. The area is rich in history, with historic sites such as old pioneer ranches, buildings of native stone, houses, cabins, and schools available to the public.

Environmental Justice

Environmental justice issues are concerned with actions that unequally impact a given segment of society either as a result of physical location, perception, design, or noise, among others. On February 11, 1994, Executive Order 12898, "Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations" was published in the *Federal Register* (59 FR 7629). The executive order requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations (defined as those living below the poverty level). The executive order makes clear that its provisions apply fully to American Indian populations and Indian tribes, specifically to affects on tribal lands, treaty rights, trust responsibilities, and the health and environment of Indian communities. Environmental justice concerns are usually directly associated with impacts on the natural and physical environment, but these impacts are likely to be interrelated to social and economic impacts as well.

Native American access to cultural and religious sites may fall under the umbrella of environmental justice concerns if the sites are on tribal lands or access to a specific location has been granted by treaty right. With regard to environmental justice issues affecting Native American tribes or groups, the planning area contains no tribal lands or Indian communities, and no treaty rights or Indian trust resources are known to exist for this area.

TABLE 3-17
RECREATION-RELATED INCOME UNDER EXISTING MANAGEMENT IN 1989

Recreation Activity	Total Visitor Days			Total Planning Area Visitor Days	Visitor Days on BLM Lands	Resulting Income		Total BLM
	Wyoming ^d	Crook	Niobrara			Expended per Day ^a	Total Planning Area Expenditures	
Fishing	3,107,036	68,110	6,645	16,560	91,315	\$ 54.83	\$ 5,006,801	\$ —
Elk hunting	301,650	1,402	62	156	1,620	70.90	114,858	6,594
Mule deer hunting	354,967	16,355	4,158	5,558	26,071	64.43	1,679,755	96,258
White-tail deer hunting	72,171	30,796	1,107	2,233	34,136	64.43	2,199,382	126,025
Antelope hunting	117,916	4,783	4,216	3,070	12,069	96.53	1,165,021	66,799
Upland bird hunting	125,911	2,019 ^b	—	—	2,019	59.86	120,857	—
Turkey hunting	15,709	10,366 ^b	—	—	10,366	45.39	470,513	27,779
Geese hunting	28,344	646 ^b	—	—	646	59.86	38,670	—
Duck hunting	32,599	1,456 ^b	—	—	1,456	59.86	87,156	—
Small game	51,061	2,010 ^b	—	—	2,010	49.84	100,178	—
Non-consumptive use	—	—	—	—	—	30.00 ^c	—	15,000
Total	4,207,364	137,943	16,188	27,577	181,708		10,983,191	338,455

^a WGFD 1990 as amended.

^b Not available by county; combined figure.

^c Estimated value.

^d WGFD 1990; fiscal year 1990 data (calendar 1989).

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SOIL RESOURCES

Soil development is influenced by five major factors: climate, living organisms, parent material, topography, and time. In the planning area these factors have combined to produce soils with many different charac-

teristics. For interpretive purposes, please refer to the Wyoming General Soil Map (Univ. of WY 1977). Due to the general nature of this map, it is intended to provide a broad perspective for planning purposes rather than decisions on the use of specific tracts. Table 3-18 is a list of general soil units in the planning area taken from the Wyoming General Soil Map.

**TABLE 3-18
GENERAL SOIL UNITS IN THE PLANNING AREA**

Soil Unit	Percentage of Area	Characteristics
SOILS OF THE MOUNTAINS AND MOUNTAIN VALLEYS		
MF-1	7.3	Eutroboralfs-Haploboralls Association. Dominantly dark colored soils developing in residuum and transported materials from igneous and sedimentary bedrocks.
SOILS OF THE EASTERN WYOMING PLAINS (soils formed from transported materials)		
P-3	5.3	Torrifluvents-Haplargids-Torriorthents Association. Nearly level to gently sloping soils in alluvium on floodplains and terraces.
SOILS OF THE EASTERN WYOMING PLAINS (soils formed from residual materials on steep uplands)		
P-4	2.6	Torriorthents, shallow Association. Shallow and very deep soils developing in residuum and alluvium from interbedded sandstone and shales.
P-5	24.9	Torriorthents-Haplargids Association. Rolling to steep soils are developing in residuum and alluvium from interbedded sandstone and shales.
P-6	5.4	Torriorthents-Torriorthents, shallow Association. Rolling to steep soils are developing in residuum from siltstones.
P-9	0.4	Argiustolls Association. Located in the Hartville uplift area. Sloping to steep soils developing in residuum from metasedimentary bedrock.
P-10	6.0	Torriorthents, fine Association. Gently rolling soils developing in residuum from shale.
P-11	10.5	Torriorthents-Argiustolls Association. Located adjacent to the Black Hills. These gently sloping to steep soils are developing in residuum from interbedded shales and sandstone.
P-12	4.7	Torriorthents-Argiustolls-Haplustolls Association. Adjacent to the Black Hills. Gently sloping soils are developing in residuum and alluvium from siltstones and limestones.
P-13	2.8	Haplargids-Paleargids-Torriorthents Association. Located in the central part of the Powder River Basin. Rolling soils are developing in residuum and alluvium from interbedded sandstones and shales.
P-16	7.5	Argiustolls-Haplustolls Association. Gently rolling and rolling soils developing in residuum from fine-grained sandstone.
P-21	22.7	Torriorthents, fine-Torrifluvents Association. Gently to moderately sloping soils are developing in alluvium and residuum from shales.

SOURCE: Univ. of WY 1977.

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Specific soil information for Crook County is available in the "Soil Survey of Crook County, Wyoming" (USDA, NRCS 1983). A similar detailed survey has been completed for Weston County, and it is published in "Soil Survey of Weston County, Wyoming" (USDA, NRCS 1990). The NRCS has completed, but not yet published, a detailed survey of Niobrara County. These more detailed surveys should be used when implementing land management practices.

All of the publications cited are available for review at the Casper District office. Copies may also be available at local libraries, NRCS offices, or the University of Wyoming.

Soils in the study area can be broken into two broad delineations, soils of the mountains and mountain valleys, and soils of the plains.

Soils of the Mountains and Mountain Valleys

This association is located in the Black Hills. These generally dark-colored soils are developed in residuum and transported materials from igneous and sedimentary bedrock. The soils formed in a cool (frigid) climate and are usually moist in some parts during the summer. This mapping unit is rolling to steep, mountainous landscape with narrow valleys and is principally forest covered with interspersed areas of grass-shrub lands. Average annual precipitation (AAP) is 14 to 24 inches; mean annual soil temperature (MAST) is less than 47° and, mean summer soil temperature (MSST) is greater than 59°F.

Soils of the Eastern Wyoming Plains

The plains soils can be divided into three broad groups: soils formed from transported materials, soils formed from residual materials on steep uplands, and soils on nearly level to rolling upland plains, terraces, and fans. Soils formed in transported materials are associated with the major drainages in northeastern Wyoming. The soils are nearly level to gently sloping (zero to six percent slopes) and are developing in alluvium on floodplains and terraces. The soils are generally deep to very deep and are well drained.

Soils formed from residual materials on steep uplands are forming in residuum and alluvium from sandstones, shales, siltstones, and metasedimentary bedrock. These rolling to steep (5% to 40% slopes) soils are generally medium textured and range from shallow to deep. Most of these upland soils are well drained.

On the nearly level to rolling upland plains, terraces and fans, soils are developing in residuum and alluvium derived from shales, sandstone, siltstone, and limestone bedrock. Soil depths range from shallow to very deep and are generally grass-shrub covered.

AAP for the plains soils is 12 to 16 inches, MAST is 47°F to 59°F, and MSST is more than 59°F.

VEGETATION RESOURCES

Information concerning vegetation resources was obtained from the 1957 through 1959 Little Missouri River Basin (MRB) studies (USDI, BLM 1957). This survey covers the better-blocked public lands in the NRA. Table 3-19 provides a description of the vegetation types and the acreages in the NRA. Because of the way the MRB studies were compiled, the vegetation types are broken out by the percent of the total MRB study in Crook and Weston counties and the total acres in the study in Niobrara County. Isolated tracts are not included.

The natural vegetative cover in the NRA is predominately the shortgrass or mixed prairie. The principal grass species are needle-and-thread grass, western wheatgrass, buffalograss, June grass, Sandberg bluegrass, Kentucky bluegrass, three awns, little bluestem, and blue grama.

For the NRA as a whole, blue grama is probably the most important species for livestock forage. Cattle, horses, and sheep make use of blue grama any season of the year. The proper use factor for blue grama for cattle and horses is usually in the neighborhood of 30% to 50%. In pure stands, blue grama will usually yield from 100 to 125 pounds of forage per acre, air dry weight. It grows from 2 to 6 inches high and may be considered as a key species of the shortgrass ranges.

Much of the range in the NRA has a sagebrush aspect in which big sage appears to be the dominant shrub vegetation often comprising one-fourth of the vegetative composition. Other shrubs associated with big sage are silver sagebrush, rabbitbrushes, plains pricklypear, wild roses, black greasewood, and sumac. Along the tributaries and main streams are found willows, cottonwoods, green ash, nuttall service berry, chokecherry, and wildplum. Rocky Mountain juniper, ponderosa pine, and creeping juniper are found along some of the higher ridges and slopes in the north, south-central, and eastern portions of the NRA.

Most of this native forage and vegetation is produced on poor soils and topographically rolling to rough terrain of the semi-arid plains, and is used by a vigorous livestock industry and abundant wildlife. For a complete

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TABLE 3-19
VEGETATION TYPES AND ACREAGES IN THE RESOURCE AREA

Crook County		Weston County		Niobrara County	
Vegetation Type	Acres	Percentage of MRB Study	Acres	Percentage of MRB Study	Acres Only
Big sage	113,000	67	110,100	29	93,985
Grassland	25,300	15	199,600	48	16,900
Conifer	12,600	8	51,200	13	360
Saltbrush	9,400	6	4,200	1	^a
Meadow	5,600	3	^a	^a	^a
Waste	1,300	1	6,100	2	^a
Browse	500	trace	6,400	2	600
Agricultural, cropland, or cultivated	300	trace	15,100	4	^a
Greasewood	^a	^a	9,200	1	^a

^a No data available.

list of plant species and their ecological characteristics see appendix J.

Dorn (1977) quotes *USDA Forest Service Research Paper RM-71, June 1971* (p. 323-325), by describing the following important vegetative types of the Black Hills.

Grassland Type

Grassland vegetation in the Black hills can be subdivided into two major divisions based on effective moisture. The drier parts of the southern Hills support a bunchgrass vegetation dominated by *Andropogon scoparius*. This type also occurs on exposed south- and west-facing slopes and balds in the Central Area, where it intergrades into the *Pinus ponderosa*/*Andropogon scoparius* subtype previously mentioned. Additional component species are similar in these two vegetation types.

The mid-grasses, *Agropyron smithii* and *Stipa* spp., dominate extensive grasslands in the southern Black Hills. Other important species in this grassland are *Artemisia frigida* and *Bouteloua* spp.

Short-grass prairie dominated by *Bouteloua gracilis* and *Buchloe dactyloides* occurs intermixed with the *Agropyron-Stipa* mid-grass type, possibly as a result of overgrazing. *Opuntia* spp. are also common here, as are *Artemisia frigida* and *Bromus japonicus*.

Grassland types are the most abundant in NRA, accounting for about half of all vegetative types.

Big Sagebrush Shrubland

An *Artemisia tridentata* shrubland type occurs on lowlands to the west and south of the Black Hills. Several other species of *Artemisia* are also present: *A. cana*, *A. filifolia*, and *A. frigida* are the most common of these. *Chrysothamnus nauseosus* is abundant on eroded sites.

Big sagebrush shrublands are the second most abundant vegetative type in the planning unit accounting for about one-fourth of the vegetative types.

Juniper Woodland

The *Juniperus scopulorum* woodland type is best developed in the southern Black Hills and on river breaks in the northern Great Plains to the east of the Black Hills. *Pinus ponderosa* is often an overstory codominate. *Ribes* spp. and *Rhus trilobata* are important shrubs. The herb layer has distinct prairie affinities. *Stipa* spp., *Bouteloua gracilis*, and *B. curtipendula* are common.

True shrubland vegetation in the Black Hills is limited, although some tree species (*Quercus macrocarpa*, *Populus tremuloides*) also grow as shrubs, especially in old forest burns. However, shrubland dominated by *Cercocarpus montanus* is present along the western edge of the Black Hills, and extends to the south and east. At lower elevations, *Cercocarpus montanus* has an open distribution and

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individual shrubs are seldom more than 4 feet tall. At higher elevations, the shrubs exceed 10 feet in height and form very dense thickets. Associated shrub species are *Ribes* spp., *Rhus trilobata*, and *Juniperus scopulorum*. The herbaceous stratum is dominated by prairie species: *Bouteloua* spp., *Calamovilfa longifolia*, and *Andropogon gerardii* are the most common species.

Ponderosa Pine Forest

Pinus ponderosa/*Cercocarpus montanus* occurs on the western edge of the Black Hills. [It] intergrades into *Cercocarpus montanus* shrubland at lower elevations. [It is] confined to calcareous parent materials. *Ribes* spp., *Rhus trilobata*, and *Andropogon* spp. are also present.

Pinus ponderosa/*Juniperus communis*/*Berberis repens* [is] the dominant forest type at higher elevations (+6,000 feet) on the northwestern Limestone Plateau. *Shepherdia canadensis*, *Bromus pumpellianus*, *Elymus glauca*, and *Trifolium* spp. are the more common associates.

Poisonous and Noxious Plants

Locoweed, silver lupine or wild bean, and larkspur are the principal poisonous plants in the NRA. Locoweed (crazyweed) is attractive spring forage but capable of causing loco disease in horses, cattle, sheep, and goats. While generally not palatable, a lack of good forage can force livestock to eat them. Relatively large amounts of the plants must be eaten to be dangerous, but this is possible because once animals start eating the plants, a craving develops for more. The entire plant is poisonous, either green or dry. Death is slow in all livestock, with symptoms in early stages of poisoning most dramatic in horses. Horses seem to be crazy (loco), spooking easily, and running into objects as if their vision is faulty. Depression, trembling, and paralysis are common to all livestock. Final stages are characterized by inability to eat or drink and lack of coordination.

Silver lupine and several other species of lupinus are especially poisonous. Most cases of poisoning result from eating pods with seeds. The pods alone, and sometimes the leaves, may also cause poisoning. Most losses from lupinus occur from sheep in the late summer and autumn. Sometimes an early snowfall may cover most of the shorter vegetation and leave the lupine pods projecting above the snow where they are easily nibbled by sheep, frequently with fatal results to large numbers. It is believed that more sheep are poisoned in Wyoming by silver lupine than by any other plant. Cattle and

horses are also poisoned at times. Poisoned sheep show signs of nervousness and labored breathing, have convulsions, and frequently froth at the mouth.

As a group, larkspurs are second only to the locoweeds in causing livestock losses in the western United States. Plains larkspur found in the NRA is one of these species known to be extremely poisonous to cattle. A 1,000-pound animal may die from larkspur poisoning within an hour after consuming 5 pounds of young larkspur. Poisoning symptoms for cattle include staggering, nausea, excessive salivation, frequent swallowing, quivering, bloating, and paralysis of respiratory centers. Sheep and horses are not extremely susceptible to larkspur poisoning and in most instances can safely graze larkspur-infested ranges. In fact, intensive use of larkspur-infested ranges by sheep has been recommended to reduce abundance of the plant, thereby decreasing the danger for cattle. Toxicity decreases with plant maturity except for seeds which remain poisonous. Chemical sprays and grubbing are effective means of control.

Cockleburs may cause problems to sheep in the NRA. The burs attach to the sheeps' wool causing irritation to their heads and faces. Burs are also responsible for a lower grade of wool.

Leafy spurge has become a serious noxious weed in the northern portion of the NRA. It grows on good cultivated lands & shallow rocky soils, spreading rapidly over range lands, where it becomes established and crowds out practically all other vegetation. Not only is leafy spurge a poor forage, but some sheep deaths have been attributed to it. Appendix K contains additional information on poisonous plants.

Weed Control

Weed control in the NRA is accomplished using herbicides. Selective control is accomplished using insects. Grazing on noxious weeds by sheep and goats is also being studied. The control is variable, but usually the weeds reappear within two years. Target species are leafy spurge and Canada and musk thistle. Ninety-five percent of the budget is spent controlling leafy spurge. Between \$20,000 and \$22,000 was spent annually over the last five years. A summary of weed control for each county in the resource area follows.

Crook County has the largest weed problem in the resource area. Leafy spurge has become a severe economic problem in the Devils Tower area. About 2,000 acres of BLM-administered surface are affected. Leafy spurge continues to spread in spite of the combined efforts of BLM, APHIS, the University of Wyoming,

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and the county weed and pest district. Between 95% and 100% of the weed budget is spent in Crook County.

Insect species were released on leafy spurge in 1991. This is a new biological control program which is showing good results in other states and Canada. Ranchers are also encouraged to use sheep or goats to control leafy spurge through grazing. The goal is to achieve control of weedy species, primarily leafy spurge, and reduce the use of herbicides.

Weston County sprays small acreages of BLM-administered public lands for leafy spurge, white top, and thistle. The weeds are in scattered tracts totaling less than 15 acres. Approximately \$800 is spent annually on this program.

Niobrara County sprayed one tract of Canada thistle in the last five years at a cost of \$6,180.

Rangeland

This is defined as land where the potential natural vegetation is predominantly grasses, grasslike plants, forbs or shrubs, and where natural vegetation was an important influence is its pristine state.

Herbaceous Rangeland

This category encompasses lands dominated by occurring grasses and forbs as well as those areas of actual rangeland which have been modified to include grasses and forbs as their principal cover, when the land is managed for rangeland purposes and not managed using practices typical of pastureland. It includes the tallgrass (or true prairie), shortgrass, bunchgrass or palouse grass and desert grass regions.

Shrub and Brush Rangeland

The shrub and brush rangeland is found in the semi-arid regions characterized by such vegetative types with woody stems as big sagebrush, shadscale, greasewood, and rabbitbrush.

Mixed Rangeland

When more than one-third intermixture of either herbaceous or shrub and brush rangeland species occurs in a specific area, it is classified as mixed rangeland. Where the intermixture land use or uses totals less than one-third of the specific area, the category appropriate to the dominate type of rangeland is applied. Mixtures of herbaceous and shrub plants are not considered rangeland.

Forestland

Forestlands are lands occupied at least 10% by forest trees of any size or lands that formerly had such tree cover and are not currently developed for nonforest use. Pinyon pine and juniper are considered forest trees.

Deciduous Forestland

Deciduous forestland includes all forested areas having a predominance of trees that lose their leaves at the end of the frost-free season or at the beginning of a dry season (cottonwood).

Conifer Forestland

Conifer forestland includes all forested areas in which the trees are predominantly those which remain green throughout the year (pine).

Wetland

Wetlands are those areas where the water table is at, near, or above the land surface for a significant part of most years.

Nonforested Wetland

These wetlands include brackish, saltmarshes, and nonvegetated flats, and also freshwater meadows, wet prairies, and open bogs.

Rare Plants

In 1989 The Nature Conservancy began an inventory of threatened, endangered, candidate, rare, or sensitive plant species on public land in the resource area. This was the first attempt at an inventory of such species or unique communities in the Casper District. It was originally designed to be a multi-phase evaluation of all public lands in the resource area that would include literature and herbarium searches, field surveys, and recommendations concerning management of species of concern and possible threats or impacts to these species resulting from management actions of other programs. Due to budgetary restraints this inventory was not continued in 1990. Work was completed in 1991, and additional information is now available.

Currently only three species of plants have been proposed for any kind of designation in the resource area and are listed in table 3-20. Both general floristic and species-specific surveys for target species will be continued to increase knowledge of the occurrence of

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TABLE 3-20
DRAFT BLM SPECIAL STATUS PLANT SPECIES
IN THE NEWCASTLE RESOURCE AREA

Scientific Name/Common Name	FED Status ^a	BLM Status	TNC Status	County
<i>Spiranthes diluvialis</i> Ute Ladies'-Tresses	FT	S	G2/S1	Niobrara
<i>Lesquerella arenosa</i> var. <i>argillosa</i> Sidesaddle Bladderpod	—	S	G5T3/S1	Niobrara
<i>Parthenium alpinum</i> Alpine fever-few	—	W	G3/S3	Niobrara

^a FT = Federally threatened; S = BLM sensitive; W = BLM "watch" list

these species and to implement management decisions that may affect these species.

Where sensitive species occur on public land, BLM will strive to use conservation practices to keep them and their habitats from decreasing and keep them from being designated as candidate or T&E species.

The goal of this approach is to try to sufficiently protect these sensitive species so that it will be unnecessary for them to be listed as either candidate species or as T&E species.

It is believed that it would be of mutual benefit to all parties with the Newcastle Resource Area if listing, due to insufficient protective measures, could be avoided.

VISUAL RESOURCES

Visual resource classification inventories have not been completed in the resource area. Map 3-14 shows the proposed visual resources classifications in the resource area. Each VRM class has an objective which prescribes the level of acceptable change in the landscape. These objectives are as follows:

VRM Class I: This class applies to areas where the objective is to maintain a landscape setting that appears unaltered by man (0 acres surface; 0 acres split estate).

VRM Class II: This class applies to areas where the objective is to design proposed alterations so as to retain the existing character of the landscape (5,760 acres surface; 4,240 acres split estate).

VRM Class III: This class applies to areas where the objective is to design proposed alterations so as to

partially retain the existing character of the landscape (284,860 acres surface; 1,404,828 acres split estate).

VRM Class IV: This class applies to areas where the objective is to provide for management activities which require major modification of the existing character of the landscape (320 acres surface; 0 acres split estate).

VRM Class V: This class applies to areas where the natural character has been drastically altered, and the area requires rehabilitation to upgrade it to one of the above classifications (0 acres surface; 0 acres split estate).

The area surrounding Devils Tower National Monument in Crook County was proposed for Class I designation (400 acres of public land surface; 3,080 acres of federal mineral estate). We have proposed to change this area to a Class II designation. The change was made because it was brought to our attention that VRM Class I designations were generally reserved for established wilderness areas or extremely sensitive areas where the viewshed was in imminent danger of being adversely modified. We determined that this was not the case in the Devils Tower National Monument area and that the safeguards provided by the Class II designation would be adequate to protect the visual character of the monument as viewed from the monument or the surrounding public lands. This change removed 400 acres of BLM-administered public surface and 3,080 acres of split estate from the Class I designation and added it to the Class II designation.

Another area, along the Wyoming-South Dakota state line in Weston County, is proposed for Class II designation. This is an area of steep slopes on the western side of the Black Hills with jagged rock outcrops and heavily

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timbered slopes that can be viewed from U.S. Highway 85, U.S. Highway 16, county, and local roads in the area. This proposed designation includes approximately 5,360 acres of public surface and about 1,160 acres of federal mineral estate.

Class IV designation would be established for the rock quarry site in T. 44 N., R. 60 W., section 8 (320 acres). No areas are classified in Class V. The remainder of the resource area would be designated as Class III (284,860 acres public land surface; 1,404,828 acres split estate) until such time as inventories are complete and designations other than these are recommended.

WATER RESOURCES

Groundwater

Since perennial supplies of surface water are scarce in the area, the primary source of water for domestic, agricultural (livestock), and industrial use is groundwater produced from wells. Water is available from several aquifers ranging from recent alluvial deposits to the Mississippian-aged Madison Limestone.

Alluvium

Alluvium aquifers are locally important throughout the resource area for livestock and irrigation use. Logically it is more important in the larger river valleys such as the Belle Fourche, Cheyenne, and Little Missouri. In the larger valleys, quantities are suitable for irrigation; however, quality may limit usefulness.

Arikaree

In parts of Niobrara County, the Arikaree Formation yields large quantities (up to 1,000 gallons per minute (gpm) or more) of water suitable for practically any use. However, use of the Arikaree in parts of Wyoming and Nebraska has often exceeded the estimated 0.33 inches of annual recharge from surface infiltration resulting in groundwater "mining." Because of this, additional uses of the water may be limited in the future.

White River

Where it is present in Niobrara County, the White River Formation has some of the best, consistently good-quality water in the resource area. Quantity is the only factor which limits its use to primarily domestic and livestock. Recharge is by exposed outcrops and surface infiltration.

Fort Union/Lance

The Fort Union and Lance formations are the primary source of domestic and stock wells. Total dissolved solids (TDS) range from less than 1,000 milligrams per liter (mg/l) to over 3,000 mg/l. The water is characterized as a calcium sulfate/sodium sulfate type. In most wells the TDS concentrations exceed the recommended level for a drinking water supply; however, it is often used as such.

Fox Hills

The Fox Hills Formation, with artesian pressure, is a commonly used aquifer for stock wells and a few domestic wells.

Newcastle Sandstone

The Newcastle Sandstone is a locally significant aquifer where fairly large quantities of good quality water are produced. This aquifer supplies a few stock and domestic wells near the area of the outcrop along the flank of the Black Hills.

Lower Cretaceous and Upper Jurassic Aquifers

This group of aquifers include the Cloverly, Fall River, Inyan Kara, Lakota, Morrison, and Sundance formations. These formations are locally important sources of stock water where they are shallow enough to be economically developed (for example, near outcrops). Except for the Hulett Sandstone member of the Sundance Formation, the yields are generally low but quite adequate for stock. The yield from the Hulett Sandstone, because of its coarse texture and relative thickness, may be the exception.

Minnelusa/Pahasapa (Madison)

The Minnelusa is generally too deep for economic development. However, where it is shallower near Hulett (700 feet) it is the source for a large flowing well. A few deep wells have been drilled to the Minnelusa and Pahasapa (or Madison) and produce large quantities of good quality water. Large supplies of water could be used from these aquifers.

Recharge to most of the aquifers underlying the area is through the outcrop areas. Except where the aquifers are exposed to the surface, recharge from surface infiltration is insignificant.

Surface Water

The resource area is drained primarily by four river basins: the Cheyenne River (51%), the Belle Fourche River (32%), the Little Missouri River (9%), and the Niobrara River (6%). A very small portion of the area (2%) drains into the Platte and Powder Rivers. Peak runoff occurs generally at two times during the year. Early runoff (March through April) is in response to snowmelt with the major peak occurring in May and June in response to rainfall events. A summary of monthly average daily flows at selected stations in the resource area and a tabulation of the stream gauging stations in the resource area are available for review in the MSA on file at the Newcastle Resource Area office. Most of the streams in the resource area are ephemeral in nature and flow only in response to snowmelt and rainfall events. Surface water quality of the area is generally suitable for livestock and limited irrigation of salt tolerant crops. Table 3-21 is a summary of water quality samples taken at selected sites in the resource area.

The State of Wyoming, DEQ, is in the process of implementing a nonpoint source pollution control plan (Clean Water Act, section 319). The state's waters have been classified into four categories, as part of this implementation. The water quality standards are listed in chapter 1 of the Wyoming DEQ's *Water Quality Rules and Regulations* (WDEQ 1990). Class 1, 2, and 3 waters are those with specific water quality standards that must be maintained (map 3-15).

WILDLIFE RESOURCES

The Newcastle Resource Area provides potential habitat for 447 species of wildlife. Of these, 282 species of birds, 76 species of mammals, 30 species of reptiles and amphibians, and 59 species of fish have been documented as occurring in the area or adjacent similar habitats.

There are a wide diversity of wildlife habitats and populations in the NRA. Important habitat types include riparian areas, grasslands, shrublands, and timbered areas. Within each of these general types or communities are individual habitat types providing a variety of combinations of food, shelter, water, and breeding habitats preferred by a variety of species. Some types are used year-long while others provide different requirements that vary seasonally. Acreage estimates for these various habitat types have not been tabulated; however, acreages of general community types are shown in table 3-22. Some specialized habitat types such as prairie dog towns, riparian areas, rare or unique plant communities, and shrub communities have been

surveyed and recorded. Information on these habitat types is available from the Newcastle Resource Area office.

When specific areas are identified as needing specific management direction, a habitat management plan (HMP) is prepared. The HMP guides the development of habitats for wildlife use. Due to the scattered land in the Newcastle Resource Area, this has not been used to a great extent. However, one HMP is under development that will cover water resources management for the entire resource area. This area is shown on map 3-15 which also shows areas that have been identified as having the potential for the development of an HMP.

Four big game species inhabit the resource area: mule deer, white-tailed deer, pronghorn antelope, and elk. Mule deer occur in most habitats in the resource area with the greatest concentrations on public land occurring in foothill areas and the rough, broken plains areas. White-tailed deer occur in the timbered habitats found along the Wyoming-South Dakota state line in Weston County and in association with riparian zones. Crucial winter ranges, including 9,080 acres of public lands, have been identified for both deer species in the resource area. These areas are shown on map 3-16. Pronghorn antelope prefer the open plains areas of all three counties, and elk use on public land is restricted to the timbered habitat types in Weston and Crook counties. Table 3-23 shows big game populations in the resource area. Maps 3-10, 3-11, 3-12, 3-17, and 3-18 show hunt areas and herd unit areas for deer, antelope, and elk.

The only trophy game species present in the area is the mountain lion. The majority of sightings have occurred in the Elk Mountain area and the foothills areas along the eastern side of Weston County.

Upland game species include sage grouse, sharp-tailed grouse, ruffed grouse, and wild turkeys. Sage grouse are found on the sagebrush grasslands, while sharp-tailed grouse prefer foothills transition zones between shrub communities and forested lands. Ruffed grouse prefer timbered habitats. Table 3-24 shows sage grouse and sharp-tailed grouse areas for the resource area. Turkeys generally prefer the same habitat types as white-tailed deer—timbered areas and riparian zones.

Waterfowl species are not common on public lands in the NRA but when suitable aquatic and riparian habitats exist they are usually occupied by ducks, geese, shorebirds, and other water birds. The Newcastle Resource Area falls in the central flyway but is not in any of the heavily used migration routes. Nesting occurs where adequate water and cover exist and use of surface waters are made in the spring and fall as resting and loafing areas for ducks and geese.

TABLE 3-21
WATER QUALITY SUMMARY FOR SELECTED STATIONS IN THE NEWCASTLE RESOURCE AREA

Station Name	Water Temperature (°C)	Specific Conductivity	pH	Bicarbonate (mg/l)	Carbonate (mg/l)	Calcium (mg/l)	Magnesium (mg/l)	Sodium (mg/l)	Potassium (mg/l)	Chlorine (mg/l)	Sulfate (mg/l)	Fluorine (mg/l)	Total Dissolved Solids (mg/l)
Niobrara River at state line	11.1	441	7.5	-----	-----	51.0	11.0	8.8	5.7	2.2	14.0	0.3	267
Belle Fourche River at Devils Tower	10.4	1,481	8.0	227.0	0.3	174.4	54.4	96.9	7.0	9.1	651.5	0.6	1,123
Belle Fourche below Moorcroft	10.7	2,386	8.0	425.1	1.3	105.4	63.9	294.3	11.0	62.5	761.9	0.5	1,500
Donkey Creek near Moorcroft	9.4	3,249	8.1	565.1	2.5	152.3	144.2	595.3	16.4	101.6	1,607.0	1.1	2,962
Beaver Creek near Newcastle	10.6	4,105	7.6	184.0	0.0	374.4	123.4	807.8	6.6	594.4	1,558.5	0.9	3,268
Cheyenne River near Riverview	15.5	3,414	8.1	302.1	0.5	193.0	77.5	497.0	11.6	74.3	1,482.2	0.7	2,288
Cheyenne River at Riverview	15.6	2,707	7.9	-----	-----	172.0	68.9	436.0	11.4	86.4	1,286.2	0.5	2,207
Lance Creek near Riverview	13.2	3,155	7.9	355.4	0.0	194.6	71.7	469.6	12.9	106.4	1,346.2	0.6	2,420
Lodgepole Creek near Hampshire	10.8	2,788	8.6	759.5	28.2	22.2	17.8	625.4	7.3	16.7	7,672.0	0.6	1,847
Black Thunder Creek near Hampshire	12.6	886	7.9	150.0	0.0	49.0	21.5	116.0	85.7	8.0	328.8	0.5	660
Little Thunder Creek near Hampshire	11.1	2,049	8.0	274.3	0.3	93.3	58.8	280.1	12.9	14.7	771.4	0.5	1,448
Little Missouri River near New Haven	14.3	1,600	7.5	140.0	0.0	100.0	59.3	172.6	9.2	4.1	706.7	0.6	1,129

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**TABLE 3-22
ACREAGE OF COMMUNITY TYPES**

Type	Acreage
Woodland	25,300
Riparian	1,363
Aquatic	1,065
Shrub-grassland ^a	264,772

^a Includes all shrub species.

**TABLE 3-23
WGFD 1989 BIG GAME POST-SEASON POPULATIONS
AND POPULATION OBJECTIVES**

Herd Unit	Post-season Population	Population Objective
ANTELOPE		
North Black Hills	14,461	14,000
South Black Hills	2,757	3,000
Thunder Basin National Grassland	10,322	12,000
Lance Creek	15,646	21,000
MULE DEER		
Black Hills	19,546	20,000
Lance Creek	10,811	18,000
Thunder Basin National Grassland	11,000	13,000
ELK		
Black Hills	342	300
Rawhide	42	40
WHITE-TAILED DEER		
Black Hills	39,303	40,000
Thunder Basin National Grassland	0	1,750

SOURCE: WGFD 1989, 1989a, 1990.

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TABLE 3-24
SAGE GROUSE AND SHARP-TAILED GROUSE AREAS
IN THE RESOURCE AREA

	Crook County	Weston County	Niobrara County	Total
SAGE GROUSE				
Number of strutting grounds ^a with public land or split estate	10	15	14	39
Number of leks on public land ^b	0	4	3	7
Total number of strutting grounds in county	10	33	14	57
SHARP-TAILED GROUSE				
Number of strutting grounds ^a with public land or split estate	23	2	0	25
Number of leks on public land ^b	0	0	0	0
Total number of strutting grounds in county	51	17	2	70

^a Strutting grounds include the entire 2-mile restricted-use area for sage grouse and a 1-mile radius for sharp-tailed grouse (including the breeding complex and nesting areas).

^b Lek refers to the actual breeding (usually called the strutting ground) at the center of the restricted-use area.

In 1982 and 1992 surveys of prairie dog towns on public lands were conducted in Crook, Weston, and Niobrara counties. The number of towns and acreages of the towns on public land is shown in table 3-9. Prairie dogs are extremely prolific and have the capability of expanding their towns very rapidly when conditions are favorable.

Since 1982 three control efforts have taken place on 970 acres of public land. In all instances only approved pesticides for rodent control were allowed and were applied either by APHIS or another applicator under their supervision.

Special Situation Areas

Aquatic Habitat

The Newcastle Resource Area is lacking in an abundance of streams and lakes that are capable of sustaining a game fishing resource. The resource area contains 1,065 acres of surface waters in 390 ponds and reservoirs. The number of miles of streams and their classification has not been completed in the resource area. While some stream habitat such as the short sections of the

TABLE 3-25
TROUT STREAM CLASSIFICATIONS

	Niobrara County	Weston County	Crook County	Total
Class 1	0	0	4	4
Class 2	0	0	1	1
Class 3	0	13	9	22
Class 4	4	0	0	4
Class 5	0	0	0	0

Class 1: Premium trout waters/fisheries of national importance.

Class 2: Very good trout waters/fisheries of statewide importance.

Class 3: Important trout waters/fisheries of regional importance.

Class 4: Low production waters/fisheries of local importance but generally incapable of sustaining substantial fishing pressure.

Class 5: Very low production waters/fisheries often incapable of sustaining a fishery.

SOURCE: WGFD 1987.

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Belle Fourche River that occur on public land support game species, the opportunity for management is low due to the small amount of public land involved. Ponds and reservoirs are well adapted to several species including rainbow trout and largemouth bass and many do contain these species. However, very little management activity has taken place due to the isolated location and lack of public access to most waters on public lands.

Table 3-25 gives the trout stream classifications for the three counties in the resource area.

Riparian Habitat

Riparian habitat inventory began in 1988 and was scheduled to be completed in 1990. Due to budget

**TABLE 3-26
PRELIMINARY RIPARIAN CLASSIFICATION INFORMATION**

	Crook County	Weston County	Niobrara County	Total
Number of wetlands inventoried	180	87	123	390
Number of wetlands classified	142	55	72	269
Total acreage of wetlands	497	133	435	1,065
CLASSIFICATION				
Good Condition				
Number of sites	45	5	10	60
Acreage of sites	163	19	103	285
Fair Condition				
Number of sites	60	25	39	124
Acreage of sites	250	80	227	557
Poor Condition				
Number of sites	31	18	0	49
Acreage of sites	75	28	0	103
No Wetland Present				
Number of sites	2	4	0	6
Acreage of sites	3	1	0	4

constraints the inventory was completed in 1992. Preliminary data depicting acres, classification, and condition are shown in table 3-26. While riparian habitat constitutes a very small percentage of total public land surface in the resource area it contributes a disproportionate value to the needs of a large number of wildlife species providing food, shelter, and breeding areas as well as nesting sites for birds.

Habitat zone types that offer a diversity in structure and vegetative species such as riparian zones, juniper-shrub woodlands, and ponderosa pine forests also support the greatest diversity of wildlife species. This is due to the large number of sites available for providing feeding, reproduction, and shelter areas.

Riparian areas also attract domestic livestock for the same reasons that wildlife species are attracted, resulting in a higher degree of use than is found on adjacent uplands. The BLM has recognized the value and importance of riparian areas and has established policies for managing riparian zones.

T&E Species

The ESA of 1973 recognized that endangered or threatened species of fish, wildlife, and plants "are of aesthetic, ecological, educational, historical, recreational and scientific value to the nation and its people." An agency cannot allow any management actions or permit any actions on federal land that could contribute to the

AFFECTED ENVIRONMENT

decline of a listed species or cause a species to become a candidate for listing under the provisions of the ESA.

In the NRA this pertains primarily to actions affecting the black-footed ferret, bald eagle, peregrine falcon, Ute ladies'-tresses orchid, swift fox, and mountain plover (Jennings 1997).

The black-footed ferret, bald eagle, and peregrine falcon may occur in the resource area (map 3-19). While no confirmed sightings have been made in the last 10 years of the black-footed ferret, several unconfirmed reports have been made and suitable habitat does exist. Black-footed ferrets use prairie dogs almost exclusively

as a prey base and live in prairie dog towns. The Ute ladies'-tresses orchid occurs within the boundaries of the resource area in Niobrara County along the Niobrara River and may occur in other riparian or wetland areas within the resource area.

Candidate species and species listed by the state of Wyoming as species in need of special management occur in the area and are listed in table 3-27. Candidate species are those federally designated (U.S. Fish and Wildlife Service) plants and animals for which the FWS has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. Proposed rules

TABLE 3-27
THREATENED, ENDANGERED, AND CANDIDATE SPECIES
IN THE RESOURCE AREA
(includes animals and plants)

Listed Species	Candidate Species ^b
Black-footed ferret.....(E) ^a <i>Mustela nigripes</i>	Mountain plover <i>Charadrius montanus</i>
Bald eagle.....(T) ^a <i>Haliaeetus leucocephalus</i>	Swift fox <i>Vulpes velox</i>
Peregrine falcon.....(E) ^a <i>Falco peregrinus</i>	
Ute ladies'-tresses orchid (T) ^a <i>Spiranthes diluvialis</i>	

^a50 CFR 17.11 & 17.12, October 31, 1996, Endangered and Threatened Wildlife and Plants.

^bJennings 1997.

The following species have been identified by the WGFD as being in need of special management and occur within the boundaries of the Newcastle Resource Area.

Avian Species of Special Concern	Mammalian Species of Special Concern
Common Loon (C) (SSC1) <i>Gavia immer</i>	Western Small-footed Myotis (C) (SSC3) <i>Myotis ciliolabrum</i>
American White Pelican (C) (SSC3) <i>Pelecanus erythrorhynchos</i>	Long-eared Myotis (C) (SSC3) <i>Myotis evotis</i>
American Bittern (C/PR) (SSC3) <i>Botarus lentiginosus</i>	Northern Myotis (C) (SSC2) <i>Myotis septentrionalis</i>
Black-crowned Night-Heron (C)(SSC3) <i>Nycticorax nycticorax</i>	Little Brown Myotis (C) (SSC3) <i>Myotis lucifugus</i>
White-faced Ibis (C) (SSC3) <i>Plegadis chihi</i>	Fringed Myotis (C) (SSC2) <i>Myotis thysanodes</i>
Forster's Tern (C) (SSC3) <i>Sterna forsteri</i>	Long-legged Myotis (C) (SSC2) <i>Myotis volans</i>

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TABLE 3-27 (continued)
THREATENED, ENDANGERED, AND CANDIDATE SPECIES
IN THE RESOURCE AREA
(includes animals and plants)

Avian Species of Special Concern	Mammalian Species of Special Concern
Black Tern (C) (SSC3) <i>Chlidonias niger</i>	Big Brown Bat (C) (SSC3) <i>Eptesicus fuscus</i>
Trumpeter Swan (C) (SSC2) <i>Cygnus buccinator</i>	Townsend's Big-eared Bat (PO) (SSC2) <i>Corynorhinus townsendii</i>
Bald Eagle (C) (SSC2) <i>Haliaeetus leucocephalus</i>	Pallid Bat (PO) (SSC2) <i>Antrozous pallidus</i>
Northern Goshawk (C) (SSC4) <i>Accipiter gentilis</i>	Black-tailed Prairie Dog (C) (SSC3) <i>Cynomys ludovicianus</i>
Ferruginous Hawk (C) (SSC3) <i>Buteo regalis</i>	Swift fox (C) (SSC3) <i>Vulpes velox</i>
Merlin (C) (SSC3) <i>Falco columbarius</i>	Lynx (HX/X) (SSC2) <i>Lynx lynx</i>
Peregrine falcon (C) (SSC3) <i>Falco peregrinus</i>	Black-footed Ferret (HX) (SSC1) <i>Mustela nigripes</i>
Mountain Plover (C) (SSC4) <i>Charadrius montanus</i>	
Long-billed Curlew (C) (SSC3) <i>Numenius americanus</i>	
Yellow-billed Cuckoo (C) (SSC3) <i>Coccyzus americanus</i>	
Lewis' Woodpecker (C) (SSC3) <i>Melanerpes lewis</i>	

C – Confirmed (>95% certain) or known to occur

PR – Predicted (>80% certain)

PO – Possible (10-80% certain)

HX – Historical Excluded, species historically occurred, but is not expected to occur anymore

X – Excluded, originally coded as confirmed, predicted or possible, but believed to be in error

SSC1, SSC2, SSC3 – Species of Special Concern 1, 2, 3 (see Appendix L for matrices of habitat and population variables).

SOURCE: WGFD 1996; USBS 1996.

have not yet been issued because this action is currently precluded by other listing activity. Development and publication of proposed rules for these plants and animals are anticipated. The FWS encourages state and other federal agencies as well as other affected parties to give consideration to these species in environmental planning.

A variety of raptors exist in nearly all habitat types in the resource area. Populations are not known for public land at this time, but nest concentration areas are shown on map 3-20. Additional use is made of public land for a forage prey base in many areas. Raptor information is

not gathered on a routine basis with the exception of recording the activity of known nests.

Fish species identified by the WGFD as being rare, but possibly occurring in the resource area are the: northern pearl dace, finescale dace, hornyhead chub, silvery minnow, goldeye, sturgeon chub, and shovel-nose sturgeon. Species identified by the WGFD as a special management concern (not rare), and only occurring in limited numbers in the resource area are: plains topminnow, Iowa darter, stoneroller, plains killifish, freshwater drum, spottail shiner, and emerald shiner.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter presents the environmental consequences of implementing the management actions in the proposed resource management plan as described in chapter 2. Both the beneficial and adverse impacts are discussed. The impact analysis is cumulative, not site-specific.

The identification and analysis of impacts presented in this chapter were based on available information and on the professional judgement of resource specialists.

The projected level of development, where known, is presented with the discussion of the individual program.

The value of maintaining biodiversity of plant and animal species has long been recognized as a necessary and desirable goal for resource management. In all alternatives presented, an effort was made to provide for consideration of biodiversity and for reasonable resource development opportunities, while still providing adequate resource and environmental protection.

EFFECTS ON ENVIRONMENTAL JUSTICE

Issues relating to the social, cultural, and economic well-being and health of minorities and low income groups were evaluated. Such issues are termed environmental justice issues. None were identified that would be effected. Other impacts related to visual resources and socioeconomic activity are addressed in the appropriate sections of this analysis.

Compliance with Executive Order 12898 concerning environmental justice will be accomplished through scoping conducted to receive public comment. In reviewing the impacts of this alternative on socioeconomic resources, surface water and groundwater quality, air quality, hazardous materials, or other elements of the human environment, it was determined that potentially adverse impacts do not disproportionately affect Native American tribes or minority and/or low-income groups in the planning review area.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
AIR QUALITY	Air pollution levels would not exceed the criteria pollutant standard levels in the planning area as a result of any activity under this alternative. The criteria pollutants, the applicable National ambient air quality standards (NAAQS), the Wyoming ambient air quality standards (WAAQS), and the background concentrations are given in table 3-1. All BLM-administered public lands in the planning area are classified as PSD Class II areas. The PSD regulations are ambient standards, and they are given in table 3-2 and explained in more detail in chapter 3.	Same as Preferred Alternative	Increased levels of timber harvest would result in large amounts of slash debris that, if burned, would increase the volume of particulates by a factor of three to the atmosphere over the levels in the Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
CULTURAL RESOURCES	All programs that involve surface-disturbing projects collectively drive the cultural resources compliance program. The oil and gas program has the largest impact, both beneficial and adverse, on cultural resources because of the number of projects and acreages involved. Even though a few undiscovered cultural sites may be damaged or destroyed, many more sites would be discovered because before approval of any of the above activities a cultural survey must be completed. For some land use activities, such as grazing and recreational activities, the impacts to cultural resources have never been adequately assessed even though damage to cultural resources may occur through trampling, erosion, and rubbing of rock art.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Public awareness and education about the significance and fragility of cultural resources are crucial to the future preservation of sites. Interpretive exhibits would increase the general publics' knowledge, awareness, and sensitivity about the area's prehistoric and historic cultural resources. As a result, it is anticipated that damage to cultural resources would decrease compared to Alternative A.	No interpretive facilities would be provided in the resource area. This lack of interpretation about the area's prehistoric and historic cultural resources would result in a potential for cultural resources being damaged.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
CULTURAL RESOURCES (continued)	Prohibiting development in the 1/4-mile or visual horizon buffer around significant historic trail segments would preserve the integrity of the trails.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
FIRE MANAGEMENT	Prescribed fires could be precluded in some areas in adherence to air quality standards.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
FOREST RESOURCES	When management practices allow the basal area to go over or under the optimum basal area, the ability of the forest to produce wood fiber would be reduced. Forest management practices under this alternative would maintain the optimum basal area.	Same as Preferred Alternative.	When management practices allow the basal area to go over or under the optimum basal area, the ability of the forest to produce wood fiber would be reduced. The accelerated harvest level of this alternative would mean an uneven supply of forest products to the local economy. The rise and fall in the supply of forest products would bring about a drastic change in the historic evenflow which has occurred.	Same as Preferred Alternative.
	Maintaining 5% of the forested acreage in the planning area for "old growth" would ensure the existence of this component of the forest and would also enhance stand diversity. Eventually larger trees would be available for harvest as these areas are rotated through the various growth cycles in the forest. This would contribute to the biodiversity of the forest and provide habitat for a variety of wildlife species that depend on or prefer older trees and their associated species.	No special attention would be given to the old growth component of forested lands on BLM-administered public surface. This could result in the loss or reduction of this component of the forest ecosystem and would not contribute to providing wildlife habitat variation.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
FOREST RESOURCES (continued)	Landownership adjustments in the resource area could have a long-term beneficial effect on the forest resource. Forest management activities would be enhanced by consolidating small parcels.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Slope restrictions for road construction and skidder-type logging would adequately reduce soil erosion and sedimentation in drainages and help maintain water quality.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The requirement to rehabilitate roads used for timber harvest (to enhance other management opportunities) would decrease timber sales costs.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Forest enhancement opportunities on 2,082 acres would be managed to maintain Class II visual resources designation on public lands around Devils Tower National Monument and a Class II visual resources designation on lands in Weston County.	The visual quality provided by the trees would not be protected.	Same as Preferred Alternative.	Same as Preferred Alternative.
GEOLOGY AND MINERAL RESOURCES <u>Leasable Minerals</u> Coal	The coal classification is no longer serving its intended purpose. Removal or termination of the classification would have no effect on land use.	The coal classification remaining on 194,520 acres other than an encumbrance on disposal would have no effect on land use.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
GEOLOGY AND MINERAL RESOURCES (continued) <u>Leasable Minerals</u> Oil and Gas	Paleontological values on BLM-administered federal interests would be preserved. Federal operators could be required to cease operations for several days while fossils are evaluated, and longer if it is a significant find. A suspension of operations may be granted if lease status is adversely affected by work stoppage due to paleontological resources.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	There should be little or no conflict with oil and gas development activity and no adverse affect on leasing in the proposed primitive campsite locations (sections 5, 8, T. 56 N., R. 66 W. and section 1, T. 56 N., R. 67 W.). Any oil and gas leases involving these areas would have a stipulation added to protect the campsite locations from surface-disturbing activities.	There would be no conflict with oil and gas development activity as no campsites would be developed.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
GEOLOGY AND MINERAL RESOURCES (continued) Oil and Gas (continued)	Designating sensitive plant species would, by itself, have little effect on leasing or development of oil and gas resources. If sensitive species were identified in oil and gas development areas, the required searches by a qualified botanist could cause slight delays and could be an additional expense for oil and gas operations. If searches could not be done year round, significant delays could occur. If these species are found, limitations on surface-disturbing activities would be implemented.	The Nature Conservancy has developed a "watch list" for sensitive plant species but that would not provide any protection.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The Class II visual designation for the area around Devils Tower would probably preclude oil and gas development on approximately 3,400 acres. Because of the low development potential for oil and gas in the area, it is unlikely any exploration or development would occur in the foreseeable future regardless of visual resource management designation.	Having no visual resource designation does not preclude oil and gas development.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The ¼-mile or visual horizon buffer protecting significant segments of National Register-eligible trails may prohibit drilling within that area. The increased cost to directionally drill may prohibit reserves from being taken.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
GEOLOGY AND MINERAL RESOURCES (continued) <i>Locatable Minerals</i>	Other program activities would have minimal impact on locatable minerals development.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Winter range stipulations (for big game species) during the period from November 15 through March 30 may limit operators conducting activities under notices of intent and plans of operation.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	A plan of operations would be required for any surface-disturbing activity over five acres. Since most of the activity in the resource area is under five acres, no plan of operations would be required for most actions. This could result in unregulated disturbance on several sites with cumulative impacts on several hundred acres.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Evaluating landslide areas before approving a plan of operation may slow down the process.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<i>Salable Minerals</i>	Wildlife winter range stipulations from November 15 through March 30 may require operators of sand and gravel pits to cease operations during that time period.	Same as Preferred Alternative.	Winter range stipulations with no exception from November 15 through March 30 would require of sand and gravel pits to cease operations until that time period has passed.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
GEOLOGY AND MINERAL RESOURCES (continued) <u>Salable Minerals</u> (continued)	The prescribed management for the Whoopup Canyon ACEC and VRM Class II area would preclude sand and gravel site development in the area. This impact would be minimal because of the ample number of existing and potential material site locations in the planning area.	Impacts to material sales would be minimal because of the ample number of existing and potential locations in the planning area. Having no VRM classifications in the planning area would not preclude potential sand and gravel site development.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The ¼-mile or visual horizon buffer protecting significant segments of eligible trails may prohibit some development within that area.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
<u>Geophysical Exploration</u>	Restrictions to protect other resources would have a minimal impact on geophysical activity. These restrictions would be such things as limiting the time or season of activity due to wet conditions or for wildlife protection.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The ¼-mile or visual horizon buffer protecting recreation sites may prohibit some development within that area.	Same as Preferred Alternative.	Development activities would not be restricted near recreation sites.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
GEOLOGY AND MINERAL RESOURCES (continued) <u>Paleontology Resources</u>	Surface-disturbing activities could impact paleontological resources by exposing buried fossils. This may result in damage, but it could create opportunities for new discoveries. Assessment and mitigation guidelines for paleontological resources provide a series of filters that paleontologists and managers can use to identify areas where there are noteworthy fossils, and to develop recommendations for mitigating damage from surface disturbance. These guidelines are applied wherever there is reason to believe that noteworthy fossils are present.	Same as Preferred Alternative.	A paleontological inventory for the entire planning area would be unnecessary because the standard provisions identified under the Preferred Alternative adequately protect the resource.	Same as Preferred Alternative.
LANDS AND REALTY	Applying protective measures of other resource programs could extend the completion time or change the location of some projects and also affect the availability of areas for land tenure adjustment.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The VRM Class II designation area around Devils Tower would protect the visual quality of the area and allow more management flexibility.	The visual quality of the area would not be protected because of a lack of VRM classification.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Prior evaluations of geologic hazards before approving lineal facilities and defining special construction methods would minimize potential problems.	Landslides may cause pipeline breaks releasing unwanted materials into the environment. Road sloughing may result in a human hazard as well as causing increased erosion and localized loss of vegetation communities.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
LIVESTOCK GRAZING	The following benefits would be expected from implementation of grazing management plans and the associated construction of any proposed range improvements (water facilities and fencing). --- Better distribution of livestock and forage use on the public lands. The effect would occur in both the short term (up to 25 years) and the long term (more than 25 years). --- It is estimated that within 25 years of implementation forage production would increase as much as 15%. The increase, which is based on production potential described in NRCS range technical guides, could be allocated to livestock, wildlife, and watershed. The effect would be long term.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The presence of prairie dogs may remove forage that would otherwise be available for livestock grazing. Allowing limited control on prairie dog towns that exist entirely on BLM-administered public land surface could limit the expansion of the towns to private and state lands.	Same as Preferred Alternative.	The level of prairie dog control in towns on BLM-administered public land surface would result in maintaining constant levels of livestock forage.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
LIVESTOCK GRAZING (continued)	Riparian management guidelines may restrict livestock use temporarily. Periods of restricted use, changes in season of use, or management of livestock in riparian zones should improve riparian areas and benefit livestock grazing. In the short term, this could result in reduction of livestock use in the "I" category allotments. The intended coordinated activity planning for riparian management could maintain or increase livestock grazing levels.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Continued fire management and rehabilitation of burned areas could restore or improve livestock forage by increasing the quality and quantity of forage.	Same as Preferred Alternative.	Livestock forage enhancement from prescribed fire would be precluded.	Same as Preferred Alternative.
	Land tenure adjustments could maintain or decrease the amount of public land available for livestock grazing. Any withdrawals, sales, or exchanges could reduce or eliminate existing grazing leases and subsequently result in fewer leases and less administrative costs for the BLM. Larger blocks of public lands resulting from exchanges or acquisition would result in more efficient BLM management areas for livestock grazing.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Timber harvesting would increase forage for livestock and wildlife.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
LIVESTOCK GRAZING (continued)	ORV designations would control the indiscriminate use of vehicles on BLM-administered public land surface. This would reduce surface disturbance and the harassment of livestock and wildlife.	No similar effects.	Indiscriminate use of motorized vehicles by the public on BLM-administered public land surface would create erosion, new roads, disturbance to wildlife and livestock, and damage to vegetation.	Same as Preferred Alternative.
	Protective measures identified for the Whoopup Canyon ACEC and developed recreation sites would restrict or preclude livestock grazing in the area. Some of the area may have to be protected by fences. This could result in a negligible reduction in grazing use. For Whoopup Canyon, a reduction of only three AUMs is anticipated.	Grazing use would not be reduced in Whoopup Canyon.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Developing the proposed Meadow Draw recreation site and reservoir could reduce livestock grazing by up to 20 AUMs but would provide a reliable source of high quality livestock and wildlife drinking water.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
RECREATION RESOURCES	Development of a recreation site at the proposed Meadow Draw Reservoir (T. 45 N., R. 63 W., section 8) would allow recreation use of the area to its fullest potential.	Same as Preferred Alternative.	Development of the Meadow Draw site in T. 45 N., R. 63 W., section 8 as a wildlife habitat improvement project with no visitor facilities would not allow the site to be used to its fullest recreation potential.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
RECREATION RESOURCES (continued)	If the Meadow Draw Reservoir area were developed, impacts associated with increased user visits could include wildlife disturbance, littering, vandalism, and sedimentation and erosion from roads and parking facilities.	Same as Preferred Alternative.	The effects would be less than the Preferred Alternative.	Same as Preferred Alternative.
	The ¼-mile or visual horizon buffer around recreation sites would maintain the visual quality of the area.	Same as Preferred Alternative.	The visual quality of these sites would not be protected.	Same as Preferred Alternative.
	Designating and managing the resource area (excluding the proposed Stateline SRMA) as an extensive recreation management area would preclude intensive recreation management but would not limit public use. This would allow developments such as primitive campsites, day use areas, and sign programs.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
RECREATION RESOURCES (continued)	Establishing the proposed primitive camping facilities in Crook County would increase visitor convenience, improve trash collection by localizing it thus reducing potential litter problems, and decrease fire hazards by providing fire pits and campsites in areas that are easier to monitor and designed to create the least amount of environmental damage possible.	Since no campsites would be developed in the planning area, camping would occur on an uncontrolled basis. Trash, litter, and damage to the resource from use of inappropriate areas would continue. A service to the public would not be met. Conflicts between recreation site development and utility corridor development could occur, but the potential is very unlikely considering the scattered land pattern of the resource area. This could cause damage to vegetation and water resources as well as harassment to wildlife and livestock. Campers find areas to their liking or convenient to activities they are pursuing and establish a camp. These areas have no trash receptacles and no fire pits or grates. Trash and human waste could accumulate at popular use areas, and the potential problem for wildfires is increased. As the demand for use of the public lands increases camping would also increase on the public lands.	Same as Preferred Alternative.	Establishing developed camping sites that would include hard-surface parking and camping areas, drinking water, trash, and sanitary facilities in Crook County would increase visitor convenience, improve trash collection, and decrease fire hazards.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
RECREATION RESOURCES (continued)	Recreational use of an area could be temporarily displaced while timber harvesting operations were being conducted. Logging slash and debris left after harvest is completed may temporarily detract from recreational use of the area. Logging can improve the visual image of forests by opening dense stands of timber, reducing overgrown stands, and allowing for an increase in the amount and diversity of understory vegetation. Logging roads can provide vehicle access into areas that were previously restricted to nonmotorized travel.	Same as Preferred Alternative.	A three-fold increase in timber harvest and a 50% increase in thinning activity in the resource area would result in a strong negative impact on the visual resource and reduce recreational opportunities in timbered areas for several decades (approximately 560 acres per year). Additional recreational use of the area could be temporarily displaced while timber harvesting operations were being conducted. An accelerated harvest would have a corresponding increase on the visual aspect of timbered areas. Accelerated harvest and increased slash and debris at this level may make those harvested areas unattractive enough to preclude recreational use until slash decomposes.	Same as Preferred Alternative.
	Restricting firewood cutting for recreational use to dead and downed trees would reduce the potential for destruction of live trees and the hazards associated with cutting standing timber. This policy would help to maintain the aesthetics of the area.	There would be no regulations or restrictions regarding cutting trees for firewood. Indiscriminate cutting of live or dead trees for firewood would affect the wildlife population by decreasing habitat, and reducing structure and diversity of an area. Excess wood removal and cutting live trees in popular camping areas would reduce the aesthetics of the area.	If no firewood cutting for camping use were allowed, an increase in cutting in undesired areas and a loss of live trees and snags would occur. The public's demand for an available resource would not be met. There would also be impacts to the aesthetics of the area.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
RECREATION RESOURCES (continued)	Camping duration restrictions are currently in effect statewide. A 14-day camping limit would provide ample opportunity for camping use while preventing extended or permanent stays on BLM-administered public surface.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The limited control of prairie dogs on BLM-administered public surface in the planning area would have little or no effect on the recreational use of this species for such activities as wildlife viewing and shooting.	Prairie dog control as a range improvement practice only when requested by a grazing lessee or adjacent landowner would decrease the recreational aspects (shooting) of prairie dog populations. This would reduce or eliminate viewing of prairie dogs and associated wildlife.	Controlling prairie dog town sizes on BLM-administered public surface would limit the availability of prairie dogs for recreational opportunities.	Same as Alternative B.
	The proposed ORV designations would allow use of the BLM-administered public surface while protecting resource values from excessive uncontrolled use. Some unroaded areas would not be accessible to motorized vehicles.	No ORV designations allows unregulated use of public lands. Damage to resource values could occur.	More resource damage could occur under this alternative compared to the Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
RECREATION RESOURCES (continued)	Range management practices that have a beneficial effect for wildlife such as water developments and improved livestock distribution also have a beneficial effect on the recreational use of wildlife. Grazing systems that include small pastures and a large number of miles of fencing can be detrimental to the recreational use of public land. Allowing livestock to graze on BLM-administered public surface during hunting seasons can lead to conflicts between recreational users and the lessee or the livestock. In the past, instances have occurred where public land users have been denied legal access to public land or discouraged from using public lands by grazing permit holders. This problem, while becoming less widespread, has not been resolved and is likely to continue in the future.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Acquiring lands with recreation potential would expand the recreational opportunities and may also provide access to public lands that were previously unavailable. Consolidating public land into larger, manageable units would have the effect of increasing recreational opportunities.	Same as Preferred Alternative.	The total amount of public lands available for recreational use would remain essentially the same--no reduction.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SOCIOECONOMICS	Income and taxes from mineral development, timber harvesting, recreation, and livestock grazing would continue to add to the economic base of the area at the same or a slightly lower level than has occurred in the recent past. The mineral industry, particularly oil and gas, is subject to potentially increased costs for such things as mitigation measures. Mitigation requirements for hazardous materials management could potentially increase costs. This may force small producers from business, and production may not be recovered because of the market. This could result in a decrease in production and tax revenues to state and local governments, as well as a slight decrease in royalty revenues returned to the state.	Income and taxes from mineral development, timber harvesting, recreation, and livestock grazing would continue to add to the economic base of the area. The application of some of the mitigation measures could increase the costs to operators.	Accelerated timber harvesting would generate about the same revenues as the Preferred Alternative but over a shorter period of time.	Same as Preferred Alternative
	In agriculture, there may be some fence construction or modification requiring labor contribution by the operator. It is unlikely that an agricultural operator would be forced from business or to change his operations.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative No Action Alternative A	Impacts Under Alternative B	Impacts Under Alternative C
SOCIOECONOMICS (continued)	The potential exists for counties to lose in lieu of tax revenues if BLM-administered public lands within the planning area are exchanged for lands in other parts of the state. This would be offset in whole or in part by tax revenues on the properties exchanged and held privately. In some counties the effect could be significant on a single parcel, but it is unlikely that a significant amount of public land in the NRA would be disposed.	Same as Preferred Alternative.	In lieu of tax revenues would not be affected.	Same as Preferred Alternative.
SOILS	Fire control measures such as fire lines remove vegetation and create drainage ways which can concentrate overland flow increasing the velocity of runoff water and increasing soil erosion. Soil erosion could be mitigated by reseeding and water barring, resulting in only short-term soil loss before fire lines are revegetated.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SOILS (continued)	Prescribed burning of rangeland or slash in forest sale areas can cause localized short-term changes in the physical, chemical, and biological properties of the soil. Severity of the impact would depend on the fuel type, duration, and the intensity of the fire. Burning could decrease soil infiltration rates causing accelerated erosion and removal of some nutrients. Vegetation could be re-established in one to three years, resulting in only short-term soil loss, and no reduction in long-term productivity of the site.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Commercial timber harvesting causes soil disturbance resulting from road building, skidding, and yarding. Soil compaction from heavy equipment and vehicle traffic would reduce infiltration and permeability and reduce root growth. However, erosion would be minimized through the use of mitigating measures including ripping, water barring, reseedling, and closing roads and skid trails.	Same as Preferred Alternative.	Accelerating the timber harvest to 460 acres per year would result in an additional 300 acres of soil disturbance per year, increasing the potential for erosion and a loss of soil productivity. About 97% of the total forest base (3,864 acres) has limited potential for forest management. These areas include steep slopes and rough terrain. This activity would result in a greater potential for erosion on the steep slopes. Shelterwood harvests and commercial thinnings would occur in these areas of limited potential.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SOILS (continued)	Effective grazing management, including rest during critical growing periods, would improve plant vigor and litter accumulation causing beneficial changes in organic matter content, soil structure, permeability, and productivity.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Underground pipeline construction results in the mixing of soil materials. When less productive subsoil becomes mixed with the topsoil, overall reclamation potential of the topsoil is reduced. Through the application of standard stipulations, site-specific mitigation measures, and the use of routing alternatives, soil erosion could be minimized.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	By locating utility/transportation systems adjacent to existing systems whenever possible, additional soil disturbance would be minimized or localized, and enhanced soil resource protection would result.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SOILS (continued)	Two general areas are proposed for establishment of campsites (T. 56 N., R. 66 W., sections 5, 8, and T. 56 N., R. 67 W., section 1). This relatively large area (2 square miles) contains up to 20 different soil types. Nearly 50% of the soil types (series) in these areas have severe limitations for the development of campsites. Limitations include steep slopes, shallow depths to bedrock, high water tables, and potential flooding. Before campsites are developed a site-specific investigation should be conducted to avoid development on soils that exhibit the severe limitations mentioned above.	Since no campsites would be developed in the area, there would be no similar impacts.	Same as Preferred Alternative.	Same as Preferred Alternative.
	If the Meadow Draw Reservoir area were developed, impacts associated with increased user visits could include wildlife disturbance, littering, vandalism, and sedimentation and erosion from roads and parking facilities.	Same as Preferred Alternative.	The effects would be less than the Preferred Alternative.	Same as Preferred Alternative.
	Enhancing riparian zones would lead to more protective vegetation and greater streambank stability. The effect would be less bank sloughing and reduced headcutting which would decrease soil loss through these processes.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
VEGETATION RESOURCES	Treatment of noxious weeds would reduce the population as well as control the spread of undesirable species to adjacent state and private lands. Noxious weeds can create a severe economic problem by crowding and out-competing desirable species for nutrients, water, and space. Currently, approximately 2,300 acres of public land in the New-castle Resource Area have noxious weed infestations (leafy spurge) severe enough to inhibit the growth of desirable plant species.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Using chemical treatments could result in damage to nontarget species as well as leave residues of chemicals in the soil. Sheep, goats, and species-specific insects would provide the necessary control while reducing the amount of herbicides used.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Temporary loss of vegetation could occur during logging on skid trails, roads, and landings. Reclaimed areas typically require treatment for the invasion of weeds for a short period after logging activity ends.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
<i>Special Status Plants Species</i>	The proposed designation for the three identified species (table 3-20 in chapter 3) would provide protection of those species through inventory requirements and avoidance by mitigation measures on surface-disturbing activities on BLM-administered public lands. This may cause some disruptions or delays in approving the surface-disturbing activities as well as an additional expense to operators.	Management actions under this alternative could impact the sensitive plant species listed in table 3-20 in chapter 3) causing them to be considered for listing as threatened and endangered species.	Same as Preferred Alternative.	Same as Preferred Alternative.
VISUAL RESOURCES	Designating visual resource management classes would provide management guidelines to control authorized actions that would occur in the planning area. These guidelines would ensure that scenic values in the area would be protected.	VRM classes would not be established in the planning area. This could allow actions to occur (oil wells, road development, utility systems, timber cutting, and fences) that could temporarily or permanently alter the visual character of the area.	Same as Preferred Alternative.	Same as Preferred Alternative.
WATER RESOURCES	Due to the small amount of activity on public land in the planning area, expected impacts to water quality would be slight.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WATER RESOURCES (continued)	Short-term increased erosion and sedimentation could be expected from forest management activities. The most significant of these would result from road construction. Through the use of standard surface-disturbance stipulations (for example, no road construction on slopes exceeding 25%) and site-specific mitigation, these impacts would be insignificant. Water yield and runoff from forest harvest areas (approximately 1,600 acres) may increase up to approximately 10% depending on size, orientation, and aspect of the harvest area. These increases would decline to preharvest levels over approximately 30 years as the stand becomes re-established. Because of the relative size of the harvest areas in comparison to the watersheds as a whole it is unlikely that these increases would be distinguishable offsite.	Same as Preferred Alternative.	The types of impacts on forest resources would be the same as those under the Preferred Alternative. However, since there would be two to three times as much land disturbed in the first 20 years, a commensurate increase in impacts could be expected, including a possible three-fold increase in water yield.	Same as Preferred Alternative.
	Implementation of grazing systems and allotment management plans (AMPs) would result in increased surface cover, reduced erosion, and improved water quality.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WATER RESOURCES (continued)	Range improvement water development projects cause concentration of livestock and wildlife that would result in localized areas of increased erosion and sedimentation. However, improved livestock and wildlife distribution would result in overall range improvement and a corresponding reduction in erosion and sedimentation on a pasture-wide basis.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Developing specific riparian management guidelines, and the subsequent implementation, would result in healthier riparian areas. Benefits to water resources as a result of improving riparian areas would include: reduced erosion and sedimentation; improved water quality (riparian zones act as filters that accumulate sediment and other pollutants); flood control (riparian areas tend to attenuate flood peaks); and, better flow duration (water stored in the alluvium associated with the riparian area during higher flows is slowly released during periods of lower flow or no flow).	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WATER RESOURCES (continued)	Mining activities associated with the sale of sand, gravel, shale, bentonite, and limestone have the potential for increasing erosion and sedimentation due to surface disturbance. These impacts would be mitigated (but not eliminated) by applying site-specific mitigation measures.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Surface disturbance associated with oil and gas exploration and development activities would result in increases in erosion and sedimentation and a reduction in water quality at specific sites. These impacts would be minimized by application of site-specific mitigation measures.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The effects of breaching a reserve pit are both chemical and physical. Chemical pollution could result from the direct contamination of water bodies and from contamination of the soil, which may release materials slowly over long periods. Physical degradation of water quality could result from destruction of vegetation, which causes increases in runoff and erosion and, consequently, increased sedimentation. These impacts could last for years until cleanup and reclamation are completed. These impacts would be minimized by application of site-specific mitigation measures.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WATER RESOURCES (continued)	Produced water is often high in dissolved solids (in some cases to the point of being classified as brine) and is often quite warm (40°C and higher is common). Discharge of this water to surface or groundwater (re injection) could cause degradation of the receiving water. Drilling activities would be regulated to mitigate these impacts.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Oil and gas exploration and development activities (particularly shot hole seismic operations) have the potential of disrupting aquifers. If well bores and shot holes are not properly plugged, mixing of aquifers may occur. This mixing could result in degraded water quality in some aquifers and lower water tables in some areas. Drilling activities would be regulated to mitigate these impacts.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	While regulations and stipulations would minimize the impact of new wells, problems with older wells increase with time. Aging, improperly or inadequately plugged and abandoned wells could also result in aquifer commingling and a resultant degradation of the water quality in some formations.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WATER RESOURCES (continued)	Prescribed burning could result in short-term increases in erosion and sedimentation due to reduction in surface cover. As ground cover re-establishes, conditions would return to preburn levels and, if final ground cover is greater than preburn, erosion and sedimentation could be reduced below preburn levels.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Developing concentrated use sites (for example, primitive campsites) would result in decreased erosion and sedimentation and chemical and biological pollutants.	Since no campsites would be developed in the area, there would be increased erosion and sedimentation and chemical and biological pollutants.	Same as Preferred Alternative.	Same as Preferred Alternative.
	If the Meadow Draw Reservoir area were developed, impacts associated with increased user visits could include wildlife disturbance, littering, vandalism, and sedimentation and erosion from roads and parking facilities.	Same as Preferred Alternative.	The effects would be less than the Preferred Alternative.	Same as Preferred Alternative.
	Implementation of the proposed off-road vehicle designations would result in decreased surface disturbance and reduction of erosion and sedimentation.	Off-road vehicle use would result in more surface disturbance, erosion, and sedimentation than the Preferred Alternative and Alternative B.	Surface disturbance, erosion, and sedimentation would be greater than under the Preferred Alternative but less than Alternative A.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WILDLIFE HABITAT	Limited control of prairie dogs would provide a prey source for a variety of species. Prairie dogs also keep the vegetative composition in close proximity to their towns in an earlier successional stage that is generally higher in forb content than later stages. Vegetation in prairie dog towns could change to a later seral stage after control or loss of prairie dogs which may be less desirable to other wildlife species. Prairie dogs, and the plant, animal, and insect habitat they provide, contribute to the natural diversity of species in an ecosystem. Limited control would ensure the contribution to biodiversity these species make on the BLM-administered public lands.	Compared to the Preferred Alternative, the effects under this alternative would be less. Biodiversity of the area would be altered by removing most of the prairie dogs as a component of the ecosystem.	Reducing or eliminating towns or acreage of towns would reduce habitat and a food source for various species. Elimination or reduction of towns would remove or lessen the availability of vegetation with higher forb content. Since vegetation in prairie dog towns could change to a later seral stage after removal of prairie dogs, this could be less desirable to some species. Biodiversity of the area could be altered by reducing prairie dogs as a component of the ecosystem.	Same as Alternative B.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WILDLIFE HABITAT (continued)	Mitigating surface-disturbing activities on BLM-administered public land surface in crucial deer winter range (table 4-2; map 3-16; 9,080 acres) would allow the deer to use the area without undue harassment when their vulnerability is greatest and their ability to respond to stress is lowest. This would also remove the potential for habitat degradation. During mild winters when other winter habitat is available, requests for surface-disturbing activities could be approved by the authorized officer after confirming that the action would not have undue detrimental effects on wildlife.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The ¼-mile or visual horizon buffer protecting significant segments of National Register eligible trails would have no effect on wildlife within that area.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WILDLIFE HABITAT (continued)	Timber harvesting and thinning could occur in crucial winter range without adversely affecting the value of the habitat. Timber stand improvements would have a beneficial effect on habitat by opening dense stands and increasing forage and species diversity in the understory. Some desirable thermal or hiding cover for some species may be reduced or lost through harvest or thinning activities. Improvements in habitat would be realized by tailoring silvicultural practices to benefit wildlife (age classes, snags, old growth, and basal area) but could result in a lower volume of timber harvesting in an area or increased cost of harvest. Also, increased forage would be available for livestock after timber harvesting.	Same as Preferred Alternative.	Accelerated timber harvest levels would be detrimental to wildlife habitat values by reducing thermal and hiding cover. Harvesting at this level (approximately 460 acres per year) would take an extended time to recover to the point where habitat values returned to their optimum stage resulting in lowered use by forest dependent species. Understory vegetation would increase resulting in increased diversity of species and an increase in available forage.	Same as Preferred Alternative.
	Managing 5% of the forested areas for old growth would provide structural diversity and habitat for wildlife species that prefer old growth type habitats.	If the old growth forest component was not managed, this could result in a loss or reduction of this forest type. This would also remove habitat for species that depend on or prefer larger trees and associated understory vegetation.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WILDLIFE HABITAT (continued)	The following benefits would be expected from implementation of grazing management plans and the associated construction of any proposed range improvements (water facilities and fencing): --- Better distribution of wildlife resulting in increased population levels as more suitable habitat is occupied. --- New water sources (reservoirs) would provide additional habitat for waterfowl (approximately 1.5 acres per year). Biodiversity, wetland, and riparian components would also be increased.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Prescribed fire would increase forage, site productivity, and improve wildlife habitat, watershed, riparian, and soil conditions.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Movement of big game animals and stress levels would not be affected by fence locations in crucial big game winter ranges.	Same as Preferred Alternative.	Fence construction in crucial big game winter ranges could restrict or impede movement of animals when their stress levels are high and energy reserves are low.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WILDLIFE HABITAT (continued)	Modifying old fences and constructing new fences to current BLM fence standards would be sufficient to eliminate the problem of restricting wildlife movement. This could result in livestock permits not being allowed to build fences on BLM-administered public surface that would be detrimental to wildlife.	Old fences could restrict wildlife movement and cause excessive stress levels.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Restricting access to reserve and overflow pits would reduce a hazard to wildlife species and domestic livestock attracted to a water source that may be contaminated with oil or toxic chemicals.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Public land boundary identification could result in increased recreational hunting pressure which could cause localized harvest to increase. This could place an undue amount of pressure on species inhabiting BLM-administered public surface. Identifying boundaries would also result in fewer complaints from hunters and landowners and provide a service to the public using public lands.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Consolidating public land through land tenure adjustment could make management more effective and could result in additional quality habitat.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

**Table 4-1
Summary of Impacts by Alternative**

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
WILDLIFE HABITAT (continued)	Implementation of riparian management guidelines would benefit wildlife, livestock, and the ecosystem as a whole through increased plant health and diversity, the presence of shade and water, stable water tables, water quality improvement, and development of highly productive soils.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	The proposed management for the Whoopup Canyon ACEC would protect wildlife habitat values through monitoring and protection of the site. Increased visitation or scientific study may result in disturbance to wildlife species inhabiting the area including nesting prairie falcons.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Limiting off-road vehicle use to existing roads and trails would reduce potential impacts including damage to vegetation, increased erosion, and disturbance to wildlife and livestock.	ORV use would damage vegetation, increase erosion, and disturb wildlife and livestock.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SPECIAL MANAGEMENT AREAS <i>Lance Creek Fossil Area</i>	The Lance Creek Fossil Area National Natural Landmark (NNL) would not be designated an ACEC. Instead, the application of statewide guidelines on assessment and mitigation of damage to paleontological resources would be applied to surface-disturbing activities throughout the planning area. This would allow consistent management and protection wherever noteworthy fossils occur.	Same as Preferred Alternative.	Same as Preferred Alternative.	Designating BLM-administered federal surface within the Lance Creek Fossil Area as an ACEC would emphasize management of paleontological resources and encourage future research of the paleontological record present in the area.
SPECIAL MANAGEMENT AREAS (continued) <i>Stateline SRMA</i>	Developing trails in the proposed Stateline SRMA would respond to an increasing recreation demand in the Black Hills area. The SRMA designation would place this area in a category that would promote recreation as the primary use of the area. Increased visitation could be expected. This could result in vandalism, littering, disturbance to wildlife and livestock, damage to historic and prehistoric sites, conflicts with adjacent landowners and other resource users, and increased erosion from trail use and vehicle travel to trailheads. Information and interpretive signs would provide the public with knowledge of the natural resources present in the area.	The area in T. 43-46 N., R. 60 W., would be open to recreational use with no facilities, interpretative signs, or developments being constructed. No recreation trail designation would be made. This could result in indiscriminate use of the area causing impacts to soils, vegetation, wildlife, livestock, and conflicts with landowners. Educational opportunities would be foregone.	To construct two trails without interpretive signs or other developments would only meet a limited demand of the public users. Not having trash receptacles or parking areas established near the trailheads would lead to increased litter and trash in the area, and erosion and damage to vegetation would occur due to indiscriminate parking.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SPECIAL MANAGEMENT AREAS (continued) <i>Whoopup Canyon ACEC</i>	Compared to Alternative A, visitor use impacts to the site would be negligible because the site would not be developed for unrestricted public visitation. Instead, the educational values of the site would be brought to the public through exhibits, presentations, other off-site means, and supervised guided tours. This would result in increased public awareness of the significance and sensitivity of the site and would also result in a significant reduction of site damage.	The petroglyph panels would be impacted by unrestricted visitor use, shooting, vandalism, and livestock rubbing the panels. Damage would include chalking, painting, shooting, defacing, scratching, and touching the panels. Vandalism would increase the rate of natural erosion of the petroglyphs. Increased surface disturbance, erosion, sedimentation, new roads, disturbance to wildlife, and damage to vegetation could occur with unrestricted visitation to the site. The archaeological deposits and surface artifacts would also be impacted. Unless protective measures were implemented, damage could be expected to increase because of greater public attention on the site.	Same as Preferred Alternative.	Establishing day use facilities would increase visitor use and could have the potential for conflicts between resource users and adjacent landowners. This could increase the potential for damage to the rock art panels and associated cultural sites. Potential for escape of campfires could increase.
	The site would be available for Native American religious and cultural use. This is fully consistent with the site protection required under the conservation use classification for the site.	Same as Preferred Alternative.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SPECIAL MANAGEMENT AREAS (continued) <i>Whoopup Canyon ACEC (continued)</i>	Controlling grazing, timber cutting, right-of-way actions, and mineral exploration and development would minimize impacts to the site. These measures would have little or no effect on other resources.	Mining activities associated with locatable minerals could destroy or cause damage to rock art panels and associated sites, increase erosion due to surface disturbance, and increase potential for vandalism. Construction of rights-of-way could impact rock art panels and associated sites. Timber harvesting activities (such as felling, skidding, yarding, and hauling) or removal of vegetative materials would impact cultural resources.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Interested publics would be able to view the site only under BLM supervision. Legal access for management and administrative purposes only would minimize the effects of unrestricted visitor use.	There would be no public access to the site although access would be permitted courtesy of surrounding private landowners. Unauthorized use of the BLM-administered public surface could occur since the BLM does not control access to the site.	Same as Alternative A.	Gaining legal public access would result in unrestricted visitor use of the site.
	Exchanging lands to acquire important private lands in the area would bring sensitive petroglyph panels and associated archeological sites into federal ownership. Management of the site would be easier and more efficient.	Same as Preferred Alternative.	The area being a combination of private and public landowners would make it difficult to manage effectively.	Same as Preferred Alternative.

Table 4-1
Summary of Impacts by Alternative

Affected Land Use or Resource	Impacts Under the Preferred Alternative	Impacts Under Alternative A No Action Alternative	Impacts Under Alternative B	Impacts Under Alternative C
SPECIAL MANAGEMENT AREAS (continued) <i>Whoopup Canyon ACEC (continued)</i>	Limiting vehicle use to administrative purposes only would eliminate unnecessary degradation of the area.	Limiting vehicle use to existing roads and trails would not adequately prevent vegetative damage and erosion in the area.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Under the VRM Class II designation, the visual integrity of the site would be maintained.	The visual integrity of the site would not be maintained.	Same as Preferred Alternative.	Same as Preferred Alternative.
	Management of fuels and control of fire would minimize potential fire and smoke damage to rock art panels.	The integrity of the petroglyphs could be affected by fire and smoke from fires.	Same as Preferred Alternative.	Same as Preferred Alternative.

ENVIRONMENTAL CONSEQUENCES

TABLE 4-2
AREAS OF SURFACE USE RESTRICTIONS

Total Area of Big Game Ungulate Winter Range^a (surface and mineral estate): 9,080 acres

Areas Covered by Grouse Protection Stipulation

	Total Number of Recorded Grounds	Number of Grounds Involving Surface and Minerals	Number of Leks on Public Lands
Sage grouse	67	39	7
Sharp-tailed grouse	70	25	0

Number of Acres Covered by "No Surface Occupancy" Stipulation^c

Sage grouse: 126
Sharp-tailed grouse: 0

Number of Acres Covered by Seasonal Stipulation^b

Sage grouse: 79,720
Sharp-tailed grouse: 7,690

Number of Acres Covered by Raptor Protection Stipulation:^b 12,900

^a To protect important big game winter ungulate winter habitat, drilling and other surface-disturbing activity will not be allowed during the period from November 15 to April 30. This limitation does not apply to maintenance and operations of producing wells. Modification of this limitation in any year may be approved in writing by the authorized officer.

^b To protect important raptor and/or sage and sharp-tailed grouse nesting habitat, drilling and other surface-disturbing activity will not be allowed during the period from February 1 to July 31. This limitation does not apply to maintenance and operations of producing wells. Modification of this limitation in any year may be approved in writing by the authorized officer.

^c No surface occupancy will be allowed on that portion of the leasing within the following defined areas for the purpose of protecting wildlife habitat (for example, sage and sharp-tailed grouse strutting grounds). Modification of this limitation in any year may be approved in writing by the authorized officer.

CHAPTER 5

CONSULTATION AND COORDINATION

INTRODUCTION

The Draft EIS for the Newcastle RMP was prepared by an interdisciplinary team of specialists from the BLM's Newcastle Resource Area, Casper District, and the Wyoming State offices. The district office and state office staffs provided in-depth reviews for accuracy and consistency.

Consultation, coordination, and public involvement on both documents have occurred throughout the planning process through scoping meetings, individual contacts, informal consultations, newspaper releases, and *Federal Register* notices.

Preparation of the document began in 1989. Much of the research and inventory that produced data used in preparation of the various sections of the document and for analysis of actions was completed prior to the start of the planning process. Due to budget constraints the development of the Draft EIS was postponed during fiscal year 1990 and resumed in fiscal year 1991.

PUBLIC PARTICIPATION

A public participation plan was prepared to identify individuals, groups, and organizations or agencies with interest or involvement in public lands. A comprehensive mailing list was developed, and opportunity ensued for active involvement in the planning and environmental analysis process. Both formal and informal input have been encouraged and used.

On September 20, 1989, a notice of intent (NOI) to prepare a Draft RMP EIS was published in the *Federal Register*.

The Casper District Multiple Use Advisory Council met in Casper on December 1, 1989. A presentation and request for input was made concerning the development of the Newcastle RMP. A similar presentation and input request was made at a subsequent Advisory Council meeting on June 28, 1991.

On April 5, 1991, we issued a press release to media contacts and elected representatives requesting public input in development of the plan.

On April 10, 1991, a response was received from the FWS listing the possible occurrence of threatened or endangered species in the resource area in accordance with section 7(c) of the ESA of 1973, as amended. The response also included a list of candidate species that may occur in the resource area. This list was updated in early 1993. In further accordance with section 7(c) of the

ESA, a biological assessment is being prepared that will determine the effects of management actions on listed and proposed species. It will be filed with FWS upon completion.

On May 20, 1991, we issued a press release to media contact and elected representatives announcing that an open house would be held on June 20, 1991 at the Newcastle Resource Area office.

On June 6, 1991, a total of 464 letters were mailed to grazing lessees, corporations, special interest groups, and individuals who had expressed interest in public land management in the resource area. The letter included an announcement of the open house to be held June 20, 1991.

On June 7, 1991 a news release was issued to 56 media contacts (newspapers, radio, and television) as well as local political representatives informing them of a public open house held at the Newcastle Resource Area office on June 20, 1991. News releases prior to April 1991 and a media interview on April 22, 1991 described the development of the Draft RMP EIS and solicited input into its development. Notices were sent to industry and professional newsletters in June, 1991, to announce the public open house in Newcastle. All public notices included the telephone number and address of the Newcastle Resource Area office to allow interested parties to direct comments if they were unable to attend the open house.

As a result of these input opportunities, 13 people attended the open house, 8 letters were received with comments, and two individuals commented by telephone.

Topics discussed at the open house covered all identified issues and management options. Opinions expressed dealt mainly with support for continuation of public land management in the Newcastle Resource Area as it has been practiced to date. Some individuals felt commodity production interests had too many restrictions placed upon them. Several comments indicated support for land tenure adjustments to facilitate management of public land resources and private land operations that have public land intermingled within their borders. Access to public land, grazing fee increases, and prairie dog control were also discussed.

On October 11, 1991, a letter was sent to 17 Native American individuals and tribes (appendix M.) The letter requested their preference for management of the Whoopup Canyon petroglyph site and whether or not there are any religious or sensitive cultural areas present in the resource area which require special protection or

CONSULTATION AND COORDINATION

consideration. The BLM requested if the individuals or tribes would wish to be consulted during planning for specific BLM actions. Finally, the letter asked for any concerns they had that would assist the BLM in analyzing those issues for the planning process.

The WGFD was contacted with a request for a listing of priority species and species of special management concern to the state of Wyoming. A sensitive plant species list was obtained from the Wyoming natural diversity data base program of the Nature Conservancy.

On July 9, 1993, an update was mailed to 556 grazing lessees, corporations, special interest groups, and individuals detailing what the Draft RMP EIS would and would not do, what the major issues in the planning area were, and the status of the Draft RMP EIS. The update also informed the public the BLM would be holding either a public meeting, open house, or both during the 90-day comment period after the draft is released. Included in this mailing was a request asking those persons if they wished to remain on the mailing list and if they would like to receive a copy of the Draft RMP EIS. Of the 556 requests mailed out, 120 requested a copy of the Draft RMP EIS be sent to them.

On September 22, 1993, we received a response from the FWS listing the possible occurrence of threatened or endangered species in the Casper District in accordance with section 7(c) of the ESA of 1973, as amended. The response included a list of candidate species that may occur in the district.

On December 3, 1993, the Environmental Protection Agency's Notice of Availability, announcing the availability of the Draft RMP was published in the *Federal Register*.

On December 22, 1993, we issued a press release to 24 media contacts and elected representatives informing them of the release of the Draft RMP EIS.

On December 23, 1993, we mailed a "Resource Management Plan Update" to 249 individuals and agencies. This update summarized the Draft RMP EIS.

On December 28, 1993, our notice of the availability of the Draft EIS was published in the *Federal Register*.

On January 19, 1994, we issued a press release to 23 media contacts and elected representatives informing them of an open house and public meeting to be held on January 26, 1994.

On January 26, 1994 we held an open house and public meeting at the Newcastle Resource Area office to discuss the draft document.

On February 2, 1994, we issued a press release to 39 media contacts and elected representatives informing

them of a public meeting being held at the Lance Creek Elementary School on February 24, 1994. That meeting was canceled due to weather.

We faxed a press release to the *Rapid City Journal* and the *Casper Star Tribune* February 28, 1994 announcing the that meeting was being rescheduled for Lusk the following day (March 1, 1994).

On March 1, 1994, a scoping meeting was held in Lusk where several people read prepared statements. Because they were so lengthy, the minutes from that meeting are not reproduced here but are on file at the Newcastle Resource Area office.

On March 3, 1994, we issued a press release to 42 media contacts and elected representatives extending the comment period on the Draft RMP to April 4, 1994 rather than March 4, 1994.

On April 1, 1994, we sent a letter to Senator Alan Simpson in response to concerns he raised regarding the March 1, 1994 meeting in Lusk. The letter discussed a meeting that was held March 28, 1994 between Don Hinrichsen, BLM Casper District Manager; Glen Nebeker, Planning Coordinator for the Casper District; Ray Brubaker, Wyoming State Director; and, the Niobrara County Resources Association.

On April 15, 1994, we issued a press release to 42 media contacts and elected representatives announcing a public meeting on April 20, 1994 at the Lusk Fairgrounds Building which BLM State Director Ray Brubaker would be attending.

On April 18, 1994, we faxed a press release to 11 media contacts and elected representatives announcing public meetings on April 20, 1994 at the Lusk Fairgrounds Building; May 3, 1994 at the Crook County Court House in Sundance; and, May 4, 1994 at the Galaxy Room of the Fountain Inn in Newcastle.

On April 26, 1994, we issued a press release to 42 media contacts and elected representatives announcing public meetings on May 3, 1994 at the Crook County Court House in Sundance and May 4, 1994 at the Galaxy Room of the Fountain Inn in Newcastle.

On May 4, 1994, a planning schedule for the Draft EIS was published in the *Federal Register*.

On May 5, 1994, a notice published in the *Federal Register* announced the extension of the comment period.

On May 11, 1994, we issued a press release to 43 media contacts and elected representatives announcing the extension of the comment period to June 10, 1994.

CONSULTATION AND COORDINATION

In order to update our mailing list, on November 30, 1994, we sent a form to over 1,600 individuals; corporations; special interest groups; media contacts; and, city, county, and congressional representatives asking for address corrections and other information regarding their interests.

On December 16, 1994, we mailed individual letters to Crook County commissioners Raymond Dennis and Perry Livingston; Weston County commissioners Ted Elliott, Martin Tysdal, John Berdahl, and Donna Baldwin-Hunt; and Niobrara County commissioners Richard James and Roderick Geisinger. These letters discussed our responsibilities under the Federal Advisory Committee Act (FACA) and announced an open house we would be holding February 22 to discuss accuracy of data.

On December 27, 1994, we mailed a questionnaire to groups and individuals from whom we received comment letters. This questionnaire asked for updated address information, to remain on our mailing list, and if they wished to receive the final RMP EIS.

On January 19, 1995 we mailed the same letters as were mailed on December 16, 1994 to the newly elected county commissioners including Crook County commissioners Major Miller, Alan Roberts, and Don Williams; Weston County commissioners Walt Soper and Lewis Mark McCoy; and Niobrara County commissioners Donna Ruffing and Tom Hamilton.

On February 3, 1995 we again mailed individual letters to Crook County commissioners Major Miller, Alan Roberts, and Don Williams; Weston County commissioners Walt Soper, Lewis Mark McCoy, Ted Elliott, Martin Tysdal, and John Berdahl; and Niobrara County commissioners Donna Ruffing, Tom Hamilton, and Richard James. We also sent letters to senators Simpson and Thomas, Congresswoman Cubin, Governor Geringer, and Jim Kruse, President of Niobrara County Resources Association (dated February 6, 1995). The letter discussed the status of the document as well as our plans for mailing a summary paper to everyone on the Newcastle mailing list.

On March 23, 1995, we mailed individual letters to Crook County commissioners Major Miller, Alan Roberts, and Don Williams; Weston County commissioners Walt Soper, Lewis Mark McCoy, Ted Elliott, Martin Tysdal, and John Berdahl; and Niobrara County commissioners Donna Ruffing, Tom Hamilton, Richard James; and, Jim Kruse, President of Niobrara County Resources Association. The letter included the summary paper and announced plans for an open house to be held April 25, 1995 to discuss the contents of the final document.

In early April 1995, we mailed a "Newcastle Resource Management Plan Update" to numerous individuals and agencies. This update summarized concerns received on the Draft RMP EIS.

On April 25, 1995, we held an open house at the BLM office in Newcastle to discuss the draft document.

On July 21, 1995, we mailed individual letters to Crook County commissioners Major Miller, Alan Roberts, and Don Williams; Weston County commissioners Walt Soper, Lewis Mark McCoy, Ted Elliott, Martin Tysdal, and John Berdahl; and Niobrara County commissioners Donna Ruffing, Tom Hamilton, and Richard James. We also sent letters to senators Simpson and Thomas, congresswoman Cubin, Jim Kruse, President of Niobrara County Resources Association, and Jim Nachtman, President LS&J Livestock Company. The letter discussed a press release that we would be issuing July 31, 1995 as well as the status of the document and when it may be available for their review.

On July 31, 1995 we mailed a press release to over 900 individuals, businesses, media, and congressional representatives stating that we would be mailing the draft document to commissioners in Crook, Niobrara, and Weston counties. It also mentioned that after the commissioners have had a chance to review the document, we would be meeting with them to discuss concerns and changes before printing the final document.

On September 29, 1995 we mailed individual letters to Crook County commissioners Major Miller, Alan Roberts, and Don Williams; Weston County commissioners Walt Soper, Lewis Mark McCoy, Ted Elliott, Martin Tysdal, and Alan Todd; and Niobrara County commissioners Donna Ruffing, Tom Hamilton, and Richard James. We also sent letters to Governor Geringer; Jim Magagna, Wyoming State Land and Farm Loan Office; senators Simpson and Thomas; Congresswoman Cubin; and Jim Kruse, President of Niobrara County Resources Association. The letter announced Floyd Ewing's retirement as Newcastle Area Manager and also updated everyone of our progress on the document.

In October 1995, Floyd Ewing, Area Manager of the Newcastle Resource Area, retired. Interim management was in place until February 1996, when Gary Johnson began his duties as the new Area Manager. Newcastle Resource Area was in the process of evaluating numerous comments and concerns relevant to the RMP Draft EIS and incorporating that information. Two additional appendices were developed and several revisions were made to the original document. The amount of time elapsed, in conjunction with the numerous concerns received, prompted development of a second draft for public review.

CONSULTATION AND COORDINATION

On January 8, 1997, we mailed a letter to 998 individuals; corporations; special interest groups; media contacts; and, city, county, and congressional representatives informing them of the changes to the second draft. The letter also contained a self-addressed post-card whereby interested persons could request a copy of the second draft.

On January 1, 1997, we issued a press release to 52 media contacts and elected representatives informing them that the Draft RMP EIS would be reissued..

On April 9, 1997, we sent letters to Niobrara, Weston, and Crook County commissioners as well as elected officials conveying the revised proposed timeline for the second Draft RMP EIS.

CONSISTENCY

Coordination with other agencies and consistency with other plans has been accomplished through continuous communication and cooperative efforts between us and involved federal, state, and local agencies and organizations.

The Wyoming Governor's Clearing House was supplied with copies of the draft document for review to ensure consistency with the state's on-going plans. The state planning coordinator was notified of the state of development of the Draft EIS and comments were received from several state agencies. Wyoming state government was also consulted during development of the second Draft EIS.

The team contacted county commissioners in Crook, Weston, and Niobrara counties to inform them of the development of the Draft EIS. The three county commissions were further consulted during development of the second Draft EIS. Officials of the Black Hills National Forest, Thunder Basin National Grassland, and Devils Tower National Monument have been contacted, and planning procedures coordinated with their on-going plans and programs.

All incorporated municipalities in the three counties have been contacted to inform them of the development of the plan.

Our Platte River and Buffalo resource areas of the Casper District, the Miles City Montana District Office, the Big Dry Resource Area, and the South Dakota Resource Area of the BLM were contacted to coordinate with their planning efforts since they adjoin the Newcastle Resource Area.

PREPARERS OF THE DOCUMENT

ABBREVIATIONS: CDO = Casper District Office; DM = District Manager; NRA = Newcastle Resource Area; P&EC = Planning and Environmental Coordination; PRRA = Platte River Resource Area; WSO = Wyoming State Office.

Name	Title and Office	Responsibility
Management Team		
Gary Johnson	Area Manager, NRA	Review and approval
Jim Murkin	Acting District Manager, CDO	Review and approval
Floyd Ewing	Former Area Manager, NRA	Review and approval
Assistant DMs, Administration, Lands and Renewable Resources, Minerals, and Operations, CDO		
Core Team		
Jack Hanson	Supervisory Petroleum Engineer, Team Leader, NRA	Minerals, plan development, technical coordination; team management
Patricia Hiller	Writer-Editor, CDO	Document format and organization; editorial management
Glen Nebeker	P&EC, CDO	Legal notices; environmental planning process, plan development, budget, technical coordination
Shelly Peele	Land Law Examiner, Fluid Minerals, NRA	Editorial review and coordination

CONSULTATION AND COORDINATION

Name	Title and Office	Responsibility
Interdisciplinary Team		
Mike Brogan	Hydrologist, CDO	Hydrology, water quality
Laurie Bryant	Paleontologist, CDO	Paleontology resources
Bill Carson	Realty Specialist, NRA	Lands and realty
Fred Crockett	Former Geologist, CDO	Fluid minerals, geologic hazards
Karie Hilt	Staff Assistant, NRA	Word processing
Jim Johnson	Fire Management Specialist, CDO	Fire management
Gary Lebsack	Former Team Leader, NRA, Planning and Environmental Coordinator, Wildlife Biologist	Wildlife habitat, T&E plants and animals, ORV, VRM, recreation
Bill McNally	Former Economist, CDO	Socioeconomic conditions
Terry Matchett	Former Access Specialist, CDO	Access
Joe Meyer	Soil Scientist, CDO	Soils
Kate Padilla	Public Affairs Specialist, CDO	Public participation
Don Peterson	Former Range Conservationist, NRA	Range management, vegetation
Mike Riggelman	Forester, NRA	Forestry
Leslie Theiss	Former Geologist, CDO	Geology, solid minerals, paleontology
Alice Tratebas	Archeologist, NRA	Cultural resources
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George Schoenfeld	Former Natural Resource Specialist, NRA	Surface protection; reclamation, weed control
State Office Support Staff		
Division of Resource Policy & Management (Branches 931, 932, 934)		Review
Division of Mineral & Land Authorization (Branches 923, 925)		Review
Joe Patti	Natural Resource Specialist, (P&EC) (934)	Review and guidance; field/WSO coordination
Division of Support Services, GIS/Mapping Science Group (955)		Graphics

CONSULTATION AND COORDINATION

Name	Title and Office	Responsibility
State Office Support Staff (continued)		
Division of Support Services, Visual Communications Team (951)		Typesetting, layout, printing arrangements
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Mike Sestak Branch of Biological Sciences (932)	Former Physical Scientist	Air Quality

COORDINATION, SUPPORT, AND REVIEW

Coordination, support, and review were provided by the divisions of Lands and Renewable Resources, Operations, Minerals, and Administration, Casper District;

the Administrative, Minerals, and Lands and Renewable Resources staffs, Newcastle Resource Area; and the divisions of Minerals, Lands and Renewable Resources, and Operations of the Wyoming State Office, BLM. The Division of Administration, Branch of Administrative Services was responsible for typesetting and printing arrangements.

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SPLIT-ESTATE LANDS

OVERVIEW

In Wyoming, the BLM manages approximately 11.6 million acres of federal minerals under private surface, usually referred to as split estate. Of this total amount, some 8.5 million acres (approximately 72%) lie within the Casper District of the BLM. The majority of this split estate resulted from the Act of July 17, 1914, **as amended**, (30 U.S.C. § 121,122) which opened prior withdrawn federal mineral lands to nonmineral entry, more specifically, the appropriate Homestead Acts (HA), and the Stockraising Homestead Act (SRHA) of December 29, 1916, **as amended**, (43 U.S.C. § 299).

By the late 1800s much of the public domain lands had been transferred to private ownership either by sale or homesteading. The annual report for 1882 from the General Land Office pointed out that companies had fraudulently acquired great quantities of valuable coal and other lands. In response to this and subsequent investigations President Theodore Roosevelt withdrew in 1906 more than 66 million acres of coal lands from settlement and location. Congress questioned whether or not the President had authority to do this. In 1910 Congress passed the General Withdrawal or Pickett Act giving the President power to "temporarily" withdraw public lands from settlement and location for public purposes.

In response to the uproar that this created with politicians, business people, and homesteaders President Roosevelt signed the Act of March 3, 1909 which allowed homesteaders who had settled coal lands to patent those lands as long as the coal was reserved to the United States. The act of June 22, 1910 permitted homesteaders to file for coal lands as long as the coal was reserved to the United States.

The mineral policies were extended to reserving portions, or in most cases, the full mineral estate to the United States by the Act of July 17, 1914. That Act opened lands that were withdrawn or classified for phosphate, nitrate, potash, oil, gas, or asphaltic minerals or are valuable for those deposits to entry under the appropriate HA. Finally, the SRHA reserved all minerals to the United States.

As part of the mineral policies initiated during his Presidency, Roosevelt had advocated a leasing policy for coal and petroleum lands, but Congress resisted the idea. In 1917, potassium deposits could be leased with the enactment of the Potash Leasing Act, which was passed because potassium was essential to America's production of military explosives during World War I. After numerous proposals and much heated debate in

the congress, the Mineral Leasing Act (30 U.S.C. § 181 et seq.) was adopted in 1920 and extended leasing to coal, petroleum, natural gas, sodium, phosphate oil shale, and gilsonite. Under the appropriate provisions and authorities of the Mineral Leasing Act, individuals and companies could prospect for and develop the minerals listed.

Discussed in this appendix is what authority BLM has to condition and regulate federally authorized leases, specifically oil and gas, on split estate and the policy and guidance used to accomplish this.

The BLM is mandated by the Federal Land Management and Policy Act of 1976 (FLPMA), section 202, to develop, maintain, and revise land use plans on public lands where appropriate using and observing the principles of multiple use and sustained yield. Section 103(e) of the FLPMA defines public lands as any lands and interest in lands owned by the United States. The mineral estate is an interest owned by the United States. BLM has an obligation to address this interest in their planning documents (43 CFR 1601.0-7(b); Bureau Manual 1601.09).

The FLPMA is intrinsically tied to the mandate provided by the National Environmental Policy Act of 1969 (NEPA). Specifically, section 102 of NEPA states, "Congress authorizes and directs the federal government and its agencies to use a systematic interdisciplinary approach which insures the integrated use of the natural and social sciences and the design arts in planning and decision making where man has an impact on man's environment." This theme is also present in section 202(c)(2) of the FLPMA where, as with NEPA, it recognizes that management of the public lands and resources (interest) and the consequences associated with their use or consumption are tied to biologic, ecologic, social, and economic boundaries and not merely surface boundaries.

Through the years, from the planning stage through development of the mineral estate, two areas of concern have consistently arisen from this split-estate issue: does the BLM have the statutory authority to regulate how private surface owners use their property, and does the BLM have the authority to condition and regulate federal mineral development such as a federal oil and gas lease. These two concerns have been addressed in the resolution of two RMP protests in 1988 on split estate (North Dakota RMP and Little Snake RMP) and two Washington Solicitor's Opinions (April 1 and 4, 1988). The conclusion states, "In summary, while the BLM does not have the legal authority in split estate situations to regulate how a surface owner manages his or her

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property, the agency does have the statutory authority to take reasonable measures to avoid or minimize adverse environmental impacts that may result from federally authorized mineral lease activity.”

An example of this authority is a January 7, 1992 Interior Board of Land Appeals (IBLA) Decision (122 IBLA 36, Glen Morgan, January 7, 1992) which stated “The operator of an oil and gas lease is responsible for reclamation of land leased for oil and gas purposes, even after expiration of the lease and even where the surface estate is privately owned. Such reclamation includes the restoration of any area within the lease boundaries disturbed by lease operations to the condition in which it was found prior to surface disturbing activities.” Another key point that was presented in this IBLA decision referenced the reservation of mineral reserves under section 9 of the SRHA. This section provides that reserved to the United States is the “right to prospect for, mine, and remove the [reserved minerals],” which right encompasses “all purposes reasonable incident to the mining or removal of the coal or other minerals” (43 USC §299, 1988). As long interpreted by the Department of the Interior, such purposes include reclamation of the surface of the affected land after mining is complete and the minerals are removed.

AUTHORITY

The Mineral Leasing Act of 1920 (MLA)

The Mineral Leasing Act, as amended (30 U.S.C. §§ 181-287) and its implemented regulations are the authority to lease and produce federal minerals. The restrictions identified through the planning process and attached to federal oil and gas leases constitutes a legal contract between the lessee and the BLM. No other party can change that contract without the expressed consent of the authorized officer. The authorized officer may waive, modify, or amend lease conditions as site-specific analysis dictates.

The section of the MLA that specifically refers to the regulation of surface-disturbing activities on oil and gas leased lands is found in 30 U.S.C. § 226(g), 1988. The key statement which does not distinguish between public surface and split-estate surface but applies to all leases is, “The Secretary of Interior, or for the National Forest lands, the Secretary of Agriculture, shall regulate **all** surface-disturbing activities conducted pursuant to **any** lease issued under this chapter, and shall determine reclamation and other actions as required in the interest of conservation of the surface resources” (emphasis added).

It has been cited that Onshore Oil and Gas Order #1 of 1983, “Approval of Operations on Onshore Federal

Land and Indian Oil and Gas Leases” is the final resolution to the split-estate mineral issue. The order has sometimes been interpreted to mean that BLM has waived all or many of its responsibilities during the development of the federal oil and gas where split estate is involved. The order does not rescind or revoke any of the law or regulations including the MLA that inspired it. Furthermore, this order cannot revoke any other BLM responsibility or obligation specified elsewhere in laws or regulations, again including the MLA.

The following are the laws and executive orders in addition to the MLA that pertain to split-estate federal mineral authorizations. They are not all inclusive; new laws and amendments are passed frequently.

Federal Land Policy and Management Act of 1976 (FLPMA)

BLM is responsible for both considering the impacts of its actions and approvals in land use planning as well as for managing those impacts for public lands. The public land to be considered for split estate is the mineral interest and not the surface. The private surface is not public land; thus, it is not subject to the planning and management requirements of the FLPMA. BLM has no authority over use of the surface by the surface owner. BLM is required to declare how the federal mineral estate will be managed in the RMP, including identification of all appropriate lease stipulations (43 CFR 3101.1; BLM Manual Handbook, H-1624-1, IV.C.2). To be consistent with the requirement of the FLPMA, it is necessary to apply the same standards for environmental protection of split estate lands as that applied to the federal surface (BLM Manual 3101.91 B.1). The FLPMA also provides in Section 202 that the BLM “shall provide for compliance with applicable pollution control laws, including State and federal air, water, noise, or other pollution standards of implemented plans.” Many of these laws are addressed later in this document.

National Environmental Policy Act of 1969 (NEPA)

BLM’s responsibilities on split-estate lands under NEPA are basically the same as for federal surface. Even though the impacts will occur on private surface, BLM is still responsible for considering alternatives or imposing protective measures since the impacts will be caused as a direct consequence of activities approved by BLM and conducted pursuant to a federal oil and gas lease. Mitigation measures for impacts which are identified during the NEPA analysis may be imposed under the general authority set out in sections 30 and 37 of the MLA of 1920 (30 U.S.C. §§ 187 and 193) and the policy

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of FLPMA. Other statutes that could apply for taking reasonable measures to avoid or minimize adverse environmental impacts that may result from federally authorized mineral lease activities are: the Clean Water Act of 1977 (CWA), the Clean Air Act (CAA), the National Historic Preservation Act (NHPA), the Endangered Species Act of 1973 (ESA), and the Federal Onshore Control and Reclamation Act of 1987 (FOCRA). The FOCRA specifically requires BLM to regulate surface disturbance and reclamation on all leases. With respect to offsite impacts which also could include off-lease, off-unit, or off-original patent boundary, mitigation must be considered and met in order to approve a lease action regardless of whether the surface is private or federal. The legal jurisdictional boundary (the lease boundary) and access to such will be discussed in more detail in the section “Access to Split Estate to Develop Federally Owned Minerals.” If an operator cannot mitigate impacts of jurisdictional boundaries for lease development, BLM gives careful consideration as to whether the application could or should be approved. Also, before leasing the mineral estate or approving lease development, BLM determines whether that action would significantly affect the quality of the humane environment regardless of the surface ownership. In this analysis, BLM considers all impacts, even visual, of the proposed action whether those impacts are to surface resources, to use of the land by the surface owner, or to the subsurface. BLM also takes into account the views of the surface owner and what effects implementing the mitigation measures for lease activity would have on his/her use of the surface.

National Historic Preservation Act (NHPA)

Section 106 of the NHPA requires the BLM to consider the effects of its actions on historic properties and to seek comments from the State Historic Preservation Officer and the Advisory Council on Historic Preservation (BLM Manual Section 8143.06). In fact, federal agencies are required to take into account the effect of any federally assisted or federally licensed **undertaking** on properties included on, or eligible for inclusion on, the National Register of Historic Places. These responsibilities are the same on split-estate land as on public land (BLM Manual 3101.9). The 1992 amendments to the NHPA replaced the definition of “undertaking” in Section 301 of the Act as follows,

“Undertaking means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including:

- (A) those carried out by or on behalf of the agency;
- (B) those carried out with federal financial assistance;

(C) those requiring a federal permit, license, or approval; and

(D) those subject to State and local regulation administered pursuant to a delegation or approval by a federal agency.”

If activities to be conducted on split estate under the terms and conditions of a federal oil and gas lease would result in adverse effects to historic properties, BLM has the authority to impose appropriate avoidance or mitigation measures. Currently, the BLM Authorized Officer consults with the State Historic Preservation Officer (SHPO) to identify and evaluate historic properties that might be affected, to assess effects, and to determine satisfactory means for avoiding or mitigating adverse effects. The Advisory Council is then given the opportunity to comment only if listed or eligible properties would be affected. This process is explained in more detail in a current agreement between the Advisory Council, SHPO and BLM (regulation guidance is found in 36 CFR 800).

BLM Manual 8100 (including the Wyoming manual supplements) contains guidance, policy, and the extent that BLM is responsible on split estate. It also indicates direction when access is denied to an operator or BLM personnel in determining effects pursuant to the NHPA. Key points in the manual are that: a) any historic properties encountered belong to landowner and if the landowner wishes, any cultural material removed from the property would be returned after study; b) the Authorized Officer must consider alternatives if the landowner continues to refuse access for cultural resource work, including the feasibility of relocating the project; and, c) the Authorized Officer may also consider approval or denial of the application without the cultural resource information. The other avenue for access is by way of the courts and is addressed under “Access to Develop Federally Owned Minerals.”

Endangered Species Act of 1973 (ESA)

Section 7 of the ESA requires federal agencies, in consultation with the Secretary (currently delegated to the US Fish and Wildlife Service) to ensure that no action authorized, funded, or carried out by the agency is likely to jeopardize the continued existence of a threatened or endangered species, whether plant or animal, or would result in the destruction or adverse modification of a species’ critical habitat. ESA requirements apply to oil and gas leasing and operations on split estate just as they do to federal lands (Onshore Order No. 1; 43 CFR 3164.1).

A proposed surface-disturbing federally related action cannot and must not be approved until all applicable federal statutory requirements have been met.

OTHER STATUTES AND EXECUTIVE ORDERS

Clean Water Act of 1977, as amended (CWA)

This act is an extremely complex and lengthy statute but is a key law regarding the control of toxic substances. It requires the BLM to participate with the state and other federal agencies in water quality planning and permitting activities. It was amended by the Water Quality Act of 1987 to require states to assess their rivers, streams, and lakes and to develop nonpoint source management plans to control and reduce specific nonpoint sources of pollution. It required federal agencies to be consistent with management programs. The 1987 Act added section 402(p) to the CWA to address storm water discharges under the National Pollutant Discharge Elimination System (NPDES) system. The discharge of any pollutant to surface waters of the United States is regulated by issuing a NPDES permit. This permit establishes effluent limitations and monitoring requirements for discharges. Oil and gas exploration and production (E&P) wastes discharged to surface water requires these permits. In 1990, the Environmental Protection Agency (EPA) published regulations requiring all storm water discharges associated with industrial facilities to obtain NPDES permits. Industrial discharges included construction projects where five or more surface acres are disturbed. Oil field development (surface disturbance) could be included in this definition. The State of Wyoming, Department of Environmental Quality (DEQ) has been delegated this responsibility from EPA of administering and issuing permits for this program. In order to meet the demand and number of permits, DEQ developed a single generic permit which was issued to cover a large number of similar facilities within a geographic area. EPA granted DEQ primacy for general permits in 1991, and in 1992, DEQ issued its general permit for storm water discharges from construction activities.

Another portion of the CWA, amended by the Water Quality Act of 1987, that warrants discussion is section 404. In oil and gas surface-disturbing activities, section 404 must be complied with. This section covers all discharges of dredged or fill material into waters of the United States including lakes, streams, intermittent waterways, and wetlands. Certain categories of activities, including certain oil and gas surface-disturbing activities, could be permitted under a current nationwide permitting system. In the Casper District, the most frequent need for a 404 permit in oil and gas development is in road and pipeline construction through wetlands. Many professionals within the Casper District have been given training in identifying these wetlands;

however, the authority for identifying and delineating wetlands lies with four federal agencies: Army Corps of Engineers (CE), EPA, Fish and Wildlife Service (FWS), and Soil Conservation Service (SCS). However, all activities affecting a riparian-wetland area which result in the discharge of dredge or fill material require a permit. In the Casper District, this is issued by the CE located at 504 West 17th Street, Cheyenne, WY 82001-4348, (307) 772-2300. Other permits are required when a 404 permit is needed. An example is a 401 permit (Water Quality Certification) from the DEQ. This is required before a 404 permit can be issued by the CE. This 401 certification is intended to demonstrate that the project will comply with state water quality standards and other requirements as may be imposed by the state.

Clean Air Act of 1955, as amended (CAA)

The act states that BLM and its permitted actions must comply with national and State air quality standards. It also directs BLM to cooperate with the states in carrying out their implemented plans. The act also provides for the prevention of significant deterioration of air quality and places significant responsibility upon the BLM for the protection and, in certain cases, for enhancement of air quality and air-related values including visibility.

Executive Order (EO) 11988 of 1977, "Floodplain Management"

This EO states "direct or indirect support of floodplain development must be avoided whenever there is a practical alternative." BLM Manual 7221 states, "Long- and short-term adverse impacts on natural and beneficial floodplains functions associated with the use and modification of floodplains must be avoided, to the extent possible; and actions causing definable adverse impacts (long- or short-term) to the natural and beneficial floodplain functions must include protection, minimization of damage, restoration, and preservation measures." The 1979 manual guidance is somewhat outdated; it refers to unit resource analysis (URA), management framework plan (MFP), and some BLM planning and environmental assessment guidance more recently updated, but the basic processes and guidance are still applicable. The resource area plans within the Casper District do not contain floodplain identification. The guidance refers to the appropriate official (district hydrologist) to identify the base (100- year chance of a flood) and/or critical (500-year chance of a flood) floodplain in relation to the location of the proposed action. This identification must extend upstream and downstream beyond the boundaries of the proposed action far enough to permit an analysis of the impacts that the proposal may have on the floodplain functions beyond

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the project boundary. Also, the public must be afforded an opportunity to be involved in the decision making process for all actions within a floodplain or that may affect it. The difference in restrictions for addressing proposed actions within base versus critical floodplains is somewhat lacking. However, for actions within base floodplains, the BLM will make a determination whether the proposed action will be located there. In critical floodplains, only critical actions will be identified and analyzed according to the Bureau environmental assessment process. Oil and gas activity especially involving major surface-disturbing activity qualify as critical action and should be appropriately assessed within a critical floodplain. The guidance does not state that BLM cannot authorize actions within floodplains, but it does state that mitigation and restoration measures must be completed for each alternative considered.

Executive Order 11990 of 1977, “Protection of Wetlands”

This EO directs federal agencies to take action to minimize the destruction, loss, or degradation of wetlands. All federally initiated, financed, or permitted construction projects in wetlands must include all practical measures to minimize adverse impacts. Section 404 of the CWA (discussed above) is one of the permit processes to protect or minimize adverse impacts to wetlands.

Eagle Protection Act of 1940

This act prohibits taking any golden or bald eagle or nests of such birds. Taking is defined under this statute to include molesting or disturbing. Violation of the prohibition in 16 U.S.C. §§ 668-668d is a criminal violation regardless of where the activity occurs, whether it is on public land, National Forest lands, or private lands.

Resource Conservation and Recovery Act of 1976, amended (RCRA)

This law is used to regulate the treatment, storage, and disposal of hazardous wastes. Hazardous wastes are solid wastes that are listed or exhibit one or more of the characteristics of hazardous waste such as certain human toxicity criteria or contain one or more of 50 chemical compounds/substances that are listed as hazardous constituents. RCRA defines solid wastes as any material that is discarded or intended to be discarded. It can be solid, semi-solid, liquid, or contain gaseous material. Oil and gas E&P wastes with the enactment of

an amendment to RCRA in 1980 are exempt from the hazardous waste management and disposal requirements (subtitle C of RCRA [Section 3001(b)(2)(A)]). They include drilling muds and cuttings, produced waters, and associated wastes (40 CFR 261). Generally, E&P exempt wastes are generated in primary field operations and not as a result of transportation or maintenance activities. When listed nonexempt and exempt wastes are mixed, the entire mixture could be considered a hazardous waste. For example, discarding a half empty listed solvent in a reserve pit could cause the otherwise exempt reserve pit contents to become a hazardous waste. This may result in closure of a reserve pit under RCRA hazardous wastes regulations.

The amendment to RCRA also mandated EPA to study E&P wastes and recommend appropriate regulatory action to congress. EPA conducted the study and submitted the report to Congress on December 28, 1987. This regulatory determination was made public on June 30, 1988. A key portion of this determination follows:

“The Agency plans a three-pronged approach toward filling gaps in existing State and Federal regulatory programs by:

- 1) Improving Federal programs under existing authorities in Subtitle D of RCRA, the Clean Water Act, and the Safe Drinking Water Act.¹
- 2) Working with States to encourage changes in their regulations and enforcement to improve some programs; and,
- 3) Working with Congress to develop any additional statutory authority that may be required.”

Some of the reasons put forth by EPA for this determination are:

- “Subtitle C does not provide sufficient flexibility to consider the costs and avoid the serious economic impacts that regulation would create for the industry’s exploration and production operations;
- Existing state and federal regulatory programs are generally adequate for controlling oil, gas, and geothermal wastes. Regulatory gaps in the Clean Water Act, and UIC (Underground Injection Control) program are already being addressed, and the remaining gaps in state and federal regulatory programs can be effectively addressed by formulating requirements under Subtitle D of RCRA and by working with the States;

¹ Nonhazardous wastes are regulated under subtitle D of RCRA. Subtitle D regulations are less extensive and depend primarily on state control.

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- It is impractical and inefficient to implement Subtitle C for all or some of these wastes because permitting burden that the regulatory agencies would incur if even a small percentage of these sites were considered Treatment, Storage, and Disposal Facilities (TSDFs)" (53 FR 25456, July 6, 1988).

The Interstate Oil and Gas Compact Commission (IOGCC) is an organization comprised of the governors of the 29 oil and gas producing states and has been assisting states in developing their oil and gas regulatory programs since 1935. In January 1989, the IOGCC formed a council on regulatory needs to assist EPA in its three-pronged approach mentioned above to fill the gaps in regulations. This council is comprised of 12 state regulatory agency members and is supported by a nine-member advisory committee made up of representatives from state regulatory agencies, industry, and public interest/environmental groups. This council is also assisted by representatives from EPA, Department of Energy (DOE), and BLM who act as official observers.

The purpose of the council is to recommend effective regulations, guidelines, and standards for state-level management of oil and gas production (E&P) wastes. It is not intended to form the sole basis for any future federal statutory or regulatory authorities that may be sought by EPA for E&P wastes. In 1990 the IOGCC adopted guidelines in the form of technical and administrative criteria recommended by the council and advisory committee. This publication, *EPA/IOGCC Study of State Regulation of Oil and Gas Exploration and Production Wastes* is known as "IOGCC Guidelines" or the "Green Book." These guidelines were update in May 1994 with the publication titled *IOGCC Environmental Guidelines for State Oil & Gas Regulatory Programs*.

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended (CERCLA)

CERCLA, also known as "Superfund," and closely related to RCRA, is distinct and separate in that it mandates the cleanup of **hazardous substances** which encompasses a much broader range of products than does **hazardous wastes** defined by RCRA. It requires the potentially responsible party (PRP) to undertake cleanup (section 106) or to recover costs incurred in conducting remedial actions from PRPs (section 107). Hazardous substance means any element, compound, mixture, solution, or substance designated pursuant to section 102 of CERCLA.

CERCLA provides for the exclusion of petroleum, including crude oil, or any fraction thereof which is not otherwise or specifically listed from the definition of hazardous substances, contaminants, or pollutants (sec-

tions 101 and 104). This also includes natural gas, natural gas liquids, liquified natural gas, and synthetic gas usable for fuel. The legislative history of the petroleum exclusion in CERCLA indicates that although petroleum and any fractions thereof are exempt, hazardous substances that have been added to oil but are not normally found in petroleum at the levels added, are not exempt. EPA could respond under CERCLA to releases of **added** hazardous substances from E&P wastes. Several oilfield waste disposal sites that accept RCRA Subtitle C exempt wastes are now Superfund sites because these sites were not managed to prevent the release of hazardous substances. RCRA exemption does not release the operator of liability under CERCLA.

CERCLA can be applied retroactively to provide for strict liability without regard to fault, and in appropriate circumstances, to impose joint and several liability. This liability may ultimately be the responsibility of the landowner, who also has the option of using CERCLA as the legal basis to sue the responsible parties who abandon hazardous substances on their land. It has been interpreted that any such release which is defined in section 101 of CERCLA occurring on split estate be removed by the responsible party as provided by 43 CFR 3162.5-1(c) and Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases (NTL-3A). It is further interpreted to expand the requirement by the BLM to federal oil and gas leases on split estate that any such release be removed in compliance with the regulations provided by RCRA for hazardous wastes and CERCLA for hazardous substances. (**This expanded interpretation is presently being reviewed by BLM's Washington Solicitor.**) The reasoning for this expanded interpretation is leasing and subsequent development of the federal mineral estate on split-estate land is a federal action controlled by federal regulation and applicable federal and state laws. The BLM is the managing agency for federal oil and gas lease development on split estate. Although it could be strictly interpreted that the BLM is **not** the ultimate responsible landowner (surface owner), there is a legal and moral interpretation that the BLM (the mineral estate manager) in leasing the federal minerals, is the ultimate responsible party if all else failed to secure retribution for damages and cleanup from the responsible operators/lessees. This would release the private surface owner(s) from any lease development liability of which they have no direct control. However, it would not release the private surface owner(s) from potential liability for a release of hazardous waste or substance that they authorized on their land that was not part of the federal lease development.

There is a multitude of players as well as laws in solid waste management; it is difficult to determine who to call

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or who is responsible for what. The key experts for the BLM are the hazardous materials specialists/coordinators. The regulations for hazardous substances and wastes are found in 40 CFR, and they are the enforcement domain of EPA. The DEQ is anticipated to be delegated primacy from EPA for the enforcement of the solid waste management regulations including those for hazardous substances and wastes. This delegation is anticipated to take place in October 1995.

The Department of the Interior has the following fundamental principles of waste management:

"Wherever feasible, we will seek to **prevent** the generation and acquisition of hazardous wastes; where waste generation is unavoidable, we will work to **reduce** the amounts (toxicity or risk) generated through the use of sound waste management practices; we will **manage** waste materials responsibly in order to protect not only the natural resources entrusted to us, but the many people who live and work on our public lands, and the millions more who enjoy our lands and facilities each year; we will move aggressively to **clean up and restore** areas under our care that are contaminated by pollution."

ACCESS TO SPLIT-ESTATE TO DEVELOP FEDERALLY OWNED MINERALS

Any mineral lessee or operator (any person who has acquired from the United States the mineral deposits in such land) may enter and occupy as much of the private surface (patented) as may be required for the purpose of prospecting for mining or removal of minerals upon completion of any one of the following options (43 CFR 3814, 1994):

1. Upon securing a written consent or waiver of the surface owner(s) for lands covered by the federal lease and/or access to such lease over patented lands covered by the SRHA or HA estate or a single estate unified from several parcels originally patented under the above subject acts.
2. Upon payment of damages for crops, tangible improvements, and the value of the land for grazing purposes to the owner of the lands referenced in (1) above.
3. Upon the execution of a good and sufficient bond or undertaking to the United States for the use and benefit of the owner of the land referenced in (1) above, and to secure the payment of such damages for the crops, tangible improvements and the value of the land for grazing purposes of the owner as may be determined and fixed in an action brought upon

the land or undertaken in a court of competent jurisdiction against the principles and sureties thereon.

For options 1 and 2 mentioned above, the BLM will require, at a minimum, a signed statement from the approved operator representative or the landowner that the operator/lessee and the landowner have reached an agreement for surface disturbance damages. The BLM also may require the operator/lessee to furnish any additional agreement with the surface owner for the protection of surface resources and the reclamation of disturbed areas for incorporation into conditions of approval for authorizing the action. If the agreement is not deemed adequate to protect both on and offsite damage to the lands, additional measures and mitigation will be required. If no agreement is reached, then the method according to option 3 must be followed. Under this method, a good and sufficient bond must be posted by the lessee/operator payable to the United States for payment for damages, specifically for crops, tangible improvements, and the value of the land for grazing purposes. Nationwide, statewide, and individual bonds should suffice for this coverage (BLM Manual 3104.1; Coquina Oil Corp., 41 IBLA 248, 1979; Theo R. Gassin, 55 IBLA 257, 1981). According to the procedures for this option, the lessee/operator must serve this bond on the affected landowner and serve proof to the appropriate BLM office that they have done so. This then prompts the BLM authorized officer to serve written notice (certified letter) to the landowner containing pertinent information about the proposed action and her/his right to protest. A copy must also be sent to the lessee/operator. The protest period runs for 30 days from date of service by BLM.

The emphasis in this section is on access within SRHA and HA patented land. This process for access also pertains to patents issued pursuant to section 203 (sales) and section 206 (exchanges) of the FLPMA.

The right to access an oil and gas lease includes all the land within the original patent even if that land is not within the lease. If an oil company wishes to cross one portion of a patent that has been subdivided into two portions to drill in the other portion, they have that right. In *Kinney Coastal Oil Co. v. Kieffer*, 277 US 488, 544 (1928), Coastal Oil, who held a federal oil and gas lease, sued the surface owner for subdividing the surface and erecting buildings for a town. The Supreme Court agreed with the oil company and ruled to prevent the use of the area as a commercial or residential area. Thus, the mineral owner's dominant servitude applies anywhere within the limits of the original patent no matter how far or often the surface estate has been subdivided. In another landmark case, *Mountain Fuel Supply Co. v. Smith*, 471 F. 2d (10th Cir. 1973), an oil company wished

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to cross 10 parcels to drill a well on the 11 parcel. All of the parcels have been patented at different times to different parties. At a later date, all of these parcels had been obtained by the defendant in this case. The court made no less than three significant holdings in this case. One, if the parcels had remained separately owned, the oil company would **not** have access rights across the 10 parcels to drill a well on 11; however, the company does have access rights on the 11th parcel on which they were to drill their well (471 F. 2d at 596,597). Two, where the surface ownership of all the parcels had been unified under a single ownership, the oil company would indeed have access across all the parcels (471 F. 2d at 597). Three, the approved unitization of the area by the appropriate authority was simply irrelevant (471 F. 2d at 597). The lessees were restricted to the development of their leases, or if appropriate, within a unit. The SRHA or HA access rights to develop federal mineral is dictated by the patented surface or a combination of patents unified by a single owner. Following are three decisions options that may evolve in the protest period.

If no objections are received from the landowner within the protest period, the authorized officer will issue and serve a final decision of approval of the sufficient bond coverage to the landowner with a copy going to the lessee/operator. The lessee/operator can then enter onto the surface of the patented land(s) of which are affected by the lease provided all applicable federal and state laws are met.

If the surface owner files a protest (objection) to the bond within the protest period, the authorized officer will review the bond coverage, accompanying papers, and objections to determine whether the bond should be approved or disapproved. If the bond is disapproved, a decision will be served on the lessee/operator with a copy going to the landowner. The lessee/operator will have 30 days to appeal to the Director of the BLM. There have been cases where this appeal has gone to the Interior Board of Land Appeals; however, this is not the process according to the regulations contained in 43 CFR 3814. If the bond is approved, the decision will be served to the surface owner with a copy going to the lessee/operator. The surface owner will be given 30 days to appeal the decision to the Director. If no appeal is filed, the authorized officer will serve a second final decision to the landowner approving the bond with no further right of appeal. The lessee/operator can then enter onto the land as specified above. If an appeal is filed, the action cannot be approved until the matter is settled by a decision from the Director or his delegated authority approving or disapproving the bond.

In no instances will lease action such as an APD be approved in the absence of the surface owner consent without first satisfying the requirements of 43 CFR 3814.

The purpose of these requirements is to ensure that the surface owners are treated fairly, and the mineral lessee/operators are allowed to enjoy the full privileges of their lease.

In instances where landowner demands become unreasonable or excessive, the operator is protected by 43 CFR 3814 regulations. Conversely, BLM is assuring the landowners of the opportunity to protect themselves and to assure just compensation via the 43 CFR 3814 regulations.

If the landowner and lessee/operator cannot agree or settle on a payment for damages within the lifespan of the authorization(s), especially if the lease is to be abandon, then the landowner should take her/his action to a court of competent jurisdiction to secure payment of such damages. The lessee/operator has the option also to go to court to settle for payment of damages to the landowner. This may be especially true if a lessee/landowner should want their bond released from any lease obligations including termination. If an agreement cannot be reached for settlement for the payment of damages, either party may go to court at anytime in this above mentioned process to have the court set the amount of damages which are to be paid at that time. Another option that could be pursued by a lessee/operator for access to develop federal minerals is via state condemnation procedures.

It is not BLM's position to encourage the practice of payment of damages in lieu of restoration, nor to question the terms and dollar amounts under which an agreement is made. It is merely a position to assure that an agreement is reached which is acceptable to both parties. The BLM does have the right according to the MLA to require additional surface reclamation measures on all lease actions. However, they must be reasonable, justifiable, and in compliance with all pertinent laws. The goal should be to restore these areas disturbed by lease activities and operations to their original condition or to a reasonable environmentally sound condition. The surface owner should be compensated for all damages created by lease development.

Policy and Guidance for Authorizing Class II Injection Wells for Fluid Disposal located on Split Estate, Private Surface/ Federal Minerals.

If an oil and/or gas well located within a federal oil and gas lease on split estate is converted to an injection well for disposing of off-lease, unit-produced fluids by either a third party or the current oil and gas lessee/operator, a right-of-way (ROW) is **not** the appropriate authorization and will **cease** being the permitting instrument. This policy resulted from two key IBLA decisions: Mallon Oil

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Company (104 IBLA 145, September 2, 1988), and Phillips Petroleum Company (105 IBLA 345, November 17, 1988). The outcome from the Mallon Oil Company case was that once the minerals have been removed from the ground, the void formerly occupied by the minerals reverts to the surface owner. In this case both the surface and minerals were owned by the United States, and the court upheld that an ROW issued by BLM was the appropriate authorization. In the Phillips Petroleum Company case which involved split-estate lands, the BLM did not have the authority to issue a permit for the disposal of salt water into a dry well located on private surface and federal minerals. In actuality, BLM used the wrong authorization mechanism—a permit pursuant to section 302(b) of the FLPMA instead of an ROW under section 501 of the FLPMA. However, the BLM was not the owner. According to the Mallon Oil Company case decision, the void space is the property of the surface owner. Henceforth, the federal mineral estate will be protected using the following guidelines and procedures.

Where BLM determines that there are federal minerals within the formation for injection of fluids, the appropriate authorization for fluid disposal on existing federal oil and gas leases on split estate is by an approved Sundry Notice (Form 3160-5). These well activities will be the responsibility of the appropriate lessee/operator and **not** a third party.

In considering and documenting feasibility for each case, the following factors must be analyzed, where applicable, in the applicant's proposal for subsequent well operation (Sundry Notice): (1) geology, (2) economic factors, (3) volume of produced fluids, (4) hydrology and hydrogeology, (5) land use plans, (6) availability of private, state, and other land disposal sites, (7) state and/or federal agencies' permitting requirements (On-shore Oil and Gas Order #7, 1994), (8) water quality, (9) well bore schematics (present and/or proposed), (10) monitoring requirements of down hole injection/disposal, and, (11) other factors determined by the authorized officer. Not only the applicant, but even more important, the BLM must consider these factors before approving an authorization.

If the proposal is determined to be feasible, and a Sundry Notice is the instrument of authorization, the following conditions and stipulations should be considered and included as part of the authorization:

- 1) A stipulation stating, "The disposal well authorization may be terminated by the authorized officer of the BLM by a decision notifying the approved lessee/operator thirty days (30) prior to the date of termination. Termination must be for cause which includes, but is not limited to, compliance with both

the lease and specific Sundry Notice authorization stipulations and conditions as well as the protection of the federal mineral estate, and the laws and regulations that govern thereof.

- 2) An approved underground injection control (UIC) permit issued by the State of Wyoming, Oil and Gas Conservation Commission (WOGCC), and written approval from the surface owner.
- 3) Produced fluid disposed in a well must be traced to the specific oil and gas well(s) from which it came, and these specific well(s) so stated as part of the approved Sundry Notice.

Converting federal oil and gas oil wells within a federal lease on split-estate lands to Class I commercial injection wells (wells used to dispose of hazardous waste; 40 CFR 144.6, 1993) will **not** be authorized for fluid disposal into a formation containing federal minerals in the Casper District.

If the BLM determines that the produced fluids from off-lease/unit is to be disposed of by injection into a formation found to be totally void of federal minerals, the following conditions **must** be addressed before a well is approved for disposal purposes:

- 1) The lessee/operator must comply with all the appropriate regulations within 43 CFR 3160 (1994), and more specifically section 3162.3-4, "Well Abandonment."
- 2) If used for disposal purposes, the BLM must consider that the well will meet specific criteria including: (1) that appropriate steps will be taken to avoid intermingling of fluids (oil, gas, and water) between formations or intervals that contain fluids of significant different quality, and (2) protect **all** federal minerals that may occur in other formations.
- 3) For an abandoned federal well to be used for subsurface disposal of off-lease/unit produced fluids into a formation depleted of federal minerals, the following release form, WY-06-3160-35 (Nov. 1992) must be properly filled out and signed by the private surface owner(s), and accepted by the BLM authorized officer. By signing this release form, the private surface owner acknowledges her/his potential future liability for disposal activities and for assuring the operation of the well to standards as required by appropriate federal and state regulatory agencies. With an approved release, the landowner also could ultimately assume the responsibility for the final plugging and reclamation requirements for the well. When BLM accepts this release, the lessee/operator's oil and gas bond should also be released for this well.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Casper District

DISPOSAL WELL RELEASE

KNOW ALL MEN BY THESE PRESENTS, that I, _____, of the County of _____, in the State of _____, am the surface owner and owner of the void mineral formation of the hereinafter described land upon which a well for oil or gas was drilled and to be converted to a produced water disposal well the source of produced water being from off lease/unit/or third party operators, to wit:

Operator/Lessee: _____

Oil and Gas Lease Number: _____

Well No. ____ (lot ____; ____¹/₄ ____¹/₄) Sec. ____, Twp. ____ N., Rge. ____ W.

The well is located _____ feet from the _____ line and _____ feet from the _____ line of Sec. ____.

I do hereby notify the Bureau of Land Management of my desire to allow _____ to dispose of produced water into the above described well. I do hereby release the Bureau of Land Management from any further liability authorized by this action as well as any further responsibility of plugging and restoration of the well site as related to the action.

WITNESS by hand and seal this ____ day of _____, 19 ____.

Surface Owner

Address

IN THE PRESENCE OF:

Witness

Address

Witness

Address

WY-06-3160-35 (Nov. 1992)

APPENDIX B

Landownership Adjustment Strategy of Casper District Bureau of Land Management

Proposed By: Land Exchange Team, Casper District 3/13/96

Approved By: /s/ Donald Hinrichsen 3/13/96
Don Hinrichsen, Casper District Manager Date

INTRODUCTION

The Casper District Bureau of Land Management (BLM) made up of three resource areas: Buffalo, Newcastle and Platte River has the responsibility for management of some 2.9 million acres of public lands (federal surface and federal minerals), and approximately 8.5 million acres of federal minerals referred to as split-estate (private surface and federal minerals). Focusing primarily on the 2.9 million acres of public lands within this district, many are isolated, unaccessible, and scattered parcels that are intermingled with private, State and other federal lands managed by other agencies.

PURPOSE OF THE LAND ADJUSTMENT STRATEGY

The purpose of this land adjustment strategy is to provide general guidance to the land adjustment program for Casper District in order to accomplish plan objective of the resource areas. The strategy will be useful in guiding land exchange negotiations as well as other land adjustment actions with landowners and discussing the overall program with the public.

The strategy provides general direction for federal land adjustments and may be modified or amended as new information and/or opportunities become evident. The strategy does not make hard and fast decisions on land adjustment; it provides concepts. Specific land adjustment proposals will be analyzed using the NEPA process including public participation. Decisions to implement a specific proposal will be based on the specific NEPA analysis and finding that the proposal is in the public interest and consistent with the BLM plans, and applicable laws and regulations.

Goals

The overall goals of the Casper District BLM are:

- 1) to develop a landownership pattern that will provide better access, better management and protection to the public lands,
- 2) to identify and pursue appropriate disposal actions of public land to private individuals and/or for management by other federal or State agencies to help solve problems related to intermixed landownership patterns.
- 3) to implement and accomplish landownership adjustment in a timely, cost effective manner while continuing to streamline processes.

Objectives

These objectives will tier to resource area management plans (emphasis on land adjustment using exchanges including assembled land exchanges):

- 1) provide or improve public access and recreation use and opportunities by consolidating landownership pattern and acquiring easement through land adjustment.
- 2) reduce conflicting land management objectives of private landowners and BLM.
- 3) improve resource management of BLM public lands and other federal lands to meet planning direction and allow implementation of an ecosystem management approach.
- 4) acquire lands within critical wildlife and/or Areas of Critical Environmental Concern (ACEC), and riparian areas according to planning direction.
- 5) Improve cost affective management practices and cost efficiency of management objectives by reducing the administrative costs.

JUSTIFICATION FOR A LAND ADJUSTMENT PROGRAM

The intermingled landownership pattern of this district makes it especially difficult for both the BLM and the private landowners to achieve their often different management objectives. The BLM has multiple objectives endorsed by planning objectives while the private landowners primarily have revenue production objectives. The intermingled ownerships where BLM public lands are scattered, unmanageable and unaccessible leads to conflicts in meeting these different objectives and inhibits management effectiveness and efficiency for both the BLM and the private landowners. In striving to meet its planning objectives, Casper District will plan and use landownership adjustment to consolidated public lands into more manageable and accessible units to further benefit the public and to more effectively initiate and continue sound ecosystem management practices. The intent of landownership adjustment is not to increase the federal land estate, but to consolidate parcels into more efficient and manageable patterns.

The predominant issues and majority of comments from past and current scoping meetings and interviews for resource area planning documents were ones of access to and recreation potential on public lands. Another area of high interest in these meetings and through direct inquiries over the past several years from both adjoining landowners and the general public was the desire to acquire many of these isolated federal

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(public land) parcels. Also, with the onset of range reform and the uncertainty of grazing lease fees, landowners surrounding isolated, scattered parcels of public lands within their ranch units have voiced their growing sincere interest in purchasing these lands. These scattered, isolated public lands are both expensive and impossible to manage, and more efficiency would be gained while better serving the public by disposing of these parcels. For the Casper District, in order to initiate practices and make sound decisions base on effects to ecosystem units the land pattern must be adjusted. Currently, identified within this district, there are over 300,000 acres of scattered, isolated parcels of land identified within planning documents as available for possible disposal. The majority of the adjoining landowners, the grazing lessees, and the general public have expressed interest in purchasing these parcels. In exchange for many of these disposal parcels, lands or easements could be acquired through avenues such as "assembled land exchanges" defined simply as a type of exchange where several different federal and/or private parcels are combined together and exchanged in one or more transactions over time. The expense of conducting the exchange can be distributed among several different participants and a higher dollar value can be utilized to exchange for lands or public interest therein that BLM has identified for high priority acquisition accordance with land use plans.

LAND ADJUSTMENT PROGRAM

The land adjustment program will make full use of all land adjustment tools as appropriate. These include land for land exchanges, land for other interests such as minerals, land or interest therein for easements (access, conservation), land sales, purchases, transfers and donations. Any of these tools could be used individually or in combinations to meet the land adjustment objectives. It is anticipated and emphasized that land exchanges will provide the greatest opportunity to improve the landownership pattern. No exchange may be completed without a determination that the public interest will be well served according to 43 CFR 2200.06 (b).

SCOPE OF THE PROGRAM

Casper District: 2.9 million acres of public lands and interest therein
8.5 million acres of federal mineral estate.

For exchanges in order to minimize negative local impacts such as loss of Payment in Lieu of Taxes (PILT), preference should be first given to acquiring lands in counties where these public lands are to be disposed of. If private lands cannot be acquired in the affected counties then preference should be to acquire lands or interests therein for counties within the affected resource area, followed by preference for counties within the Casper District, and finally, preference within the State of Wyoming. The public interest determination and scope of affect as well as the feasibility of the exchange will dictate the applicability of the above preferences, however, they should, at lease, be considered in the process.

LAND ADJUSTMENT EVALUATION CRITERIA

The following acquisition and disposal evaluation and ranking criteria were approved by the Casper District Corporate Board (CB) on October 11, 1995. They were developed by an interdisciplinary team referred to as the Casper District Land Exchange Team (LET) comprised of members from the resource areas and the district. The criteria were derived from laws, regulations, policy, program/resource management experience, planning decisions and presented in draft to all district personnel for review and comment.

These criteria are to be used to evaluate, rank and prioritize land exchange proposals districtwide. This criteria will be used by the LET to evaluate all exchange proposals within the district and present their recommendations to the CB. The CB will make the decision as to whether to proceed with the proposal.

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Acquisition Criteria for Casper District

Given: Acquisition of land has to have and/or provide public access that can be managed effectively and cost efficiently according to BLM goals and initiatives. Can this given be met? (If yes continue completing ranking criteria)

(Yes or No)

Explain: (i.e., non-controlled access, restricted or cooperative)

Ranking Criteria (points awarded)

Points

1) Public values.

a) Recreation

1) Hunting

a) Big Game

1) Multiple species (15 points)

or

2) Single species (10 points)

b) Small Game

1) Multiple species (15 points)

or

2) Single species (10 points)

2) Fishing (15 points)

3) ORV Use (If meets planning or public demand objectives)

a) Present (5 points)

b) Potential (5 points)

4) Scenic (0-15 points in increments of 5 points)

*(Based on visual resource management ratings)

5) Other Recreation Value(s) (5 points each)

(Specify) _____

b) Resource(s) Management

* If the resource value is present, would the value(s) acquired or consolidated be/add to the cost efficiency and manageability of them by BLM/federal agency by completing the land adjustment.

1) Improves Cost and management efficiency in:

1) Cultural Resources (5 points)

2) Forestry Resources (5 points)

3) Valuable Historic Resources (5 points)

4) Minerals Resources (5 points)

*Indicate which minerals affected:

a) Oil and Gas leases _____

b) Coal leases _____

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- c) Locatables _____
- d) Salables _____
- 5) Paleontological Resources (5 points) _____
- 6) Range Resources (5 points) _____
- 8) Watershed (5 or 10 points) _____
(wetlands/riparian)
- 7) Wildlife Resources (habitat) (5 points) _____
- 8) T & E species (5 points) _____
- 9) Other (name) _____ (5 points) _____

c) Unique Opportunities (5-50 points in increments of 5) _____

Explanation: _____

Note: Unique opportunities may also be qualified by factors that aid in the economics of the opportunities, i.e. Proponent shares a percentage of the expenses on the evaluation of the public land. Such expenses as the costs of cultural inventory, T&E, appraisal, etc.

- 2) Provide access to blocks of consolidated federal Land or State(?)lands. _____

5 points for 1-640 acres

10 points for 640-2000 acres

15 points for 2,000-5,000 acres

20 points for 5,000-10,000 acres

30 points for 10,000 + acres

Total Points: _____

a) Acres in consolidated blocks that access effects: _____ acres.

Further Explanation of topics:

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Criteria for Disposal of Public Lands Casper District

Given: Public interest will be well served.

Any one or more of the following criteria may be used to justify the disposal of public land:

*** There will be no acre restriction on disposal.**

- _____ public land because of its location and other characteristics, is difficult and uneconomical to manage.
- _____ public land is not suitable for management by another federal department or agency.
- _____ public land acquired for a specific purpose is no longer required for that or any other federal purpose.
- _____ disposal of public land would serve important public purposes
- _____ public land is more suitable for residential , commercial, agriculture or industrial development in non-federal ownership
- _____ create ownership patterns that allow for local community development that cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values.
- _____ consistent with the mission of BLM and land use plans

**** Dispose of entire grazing allotment/lease (yes or no)**

Acres in grazing allotment/lease: _____

CASPER DISTRICT LANDOWNERSHIP MAP NARRATIVE

The following areas identified on the Casper District land status map for building or consolidating within for future landownership patterns were developed by the LET (land exchange team) in conformance with current planning documents and Record of Decisions. They were reviewed, but should continued to be fine tuned as appropriate by districtwide resource specialists using their general and specific knowledge of the district land pattern and uses. These areas mostly are defined by larger blocks of federal ownership with private surface inholdings. Also noted were areas identified by the

public as lacking necessary access to these larger blocks of public lands. It should be understood that the intent is to build and consolidate within these areas, however this does not completely negate trading out of these areas depending on the merits of the individual proposal. The remaining parcels not identified within these areas are mostly scattered an/or difficult to manage public land parcels that do not offer much public benefit and may be more beneficial in private ownership or administered by either local, county, State or other federal agencies. However, each exchange no matter where it is located in this Casper District landownership map will be evaluated on its own merit and the public interest determination will be a major determination factor as to whether to pursue it or not.

Acquisition Areas-BLM

- 
- (1) Big Horn/Red Wall Area
 - (2) Rattlesnake Range
 - (3) North Platte River Drainage/Bolton Creek, Bates Creek Area
 - (4) Muddy Mountain
 - (5) Pine Ridge/San Dunes Area
 - (6) Powder River Brakes, North
 - (7) Powder River Brakes, South
 - (8) Thunder Basin Grassland Area
 - (9) Weston Hills/Spring Creek
 - (10) Little Missouri Brakes
 - (11) Inyan Kara/Newcastle
 - (12) State Line Area

The map displays the Casper District Land Status in Wyoming, overlaid with a grid. The legend identifies the following categories:

- State of Wyoming
- U.S. Forest Service and Withdrawals
- Private
- Water
- Remained lands
- Federal Withdrawals and Other Federal Agencies
- Acquired Lands

The map includes a graphic scale bar and a title block with the following information:

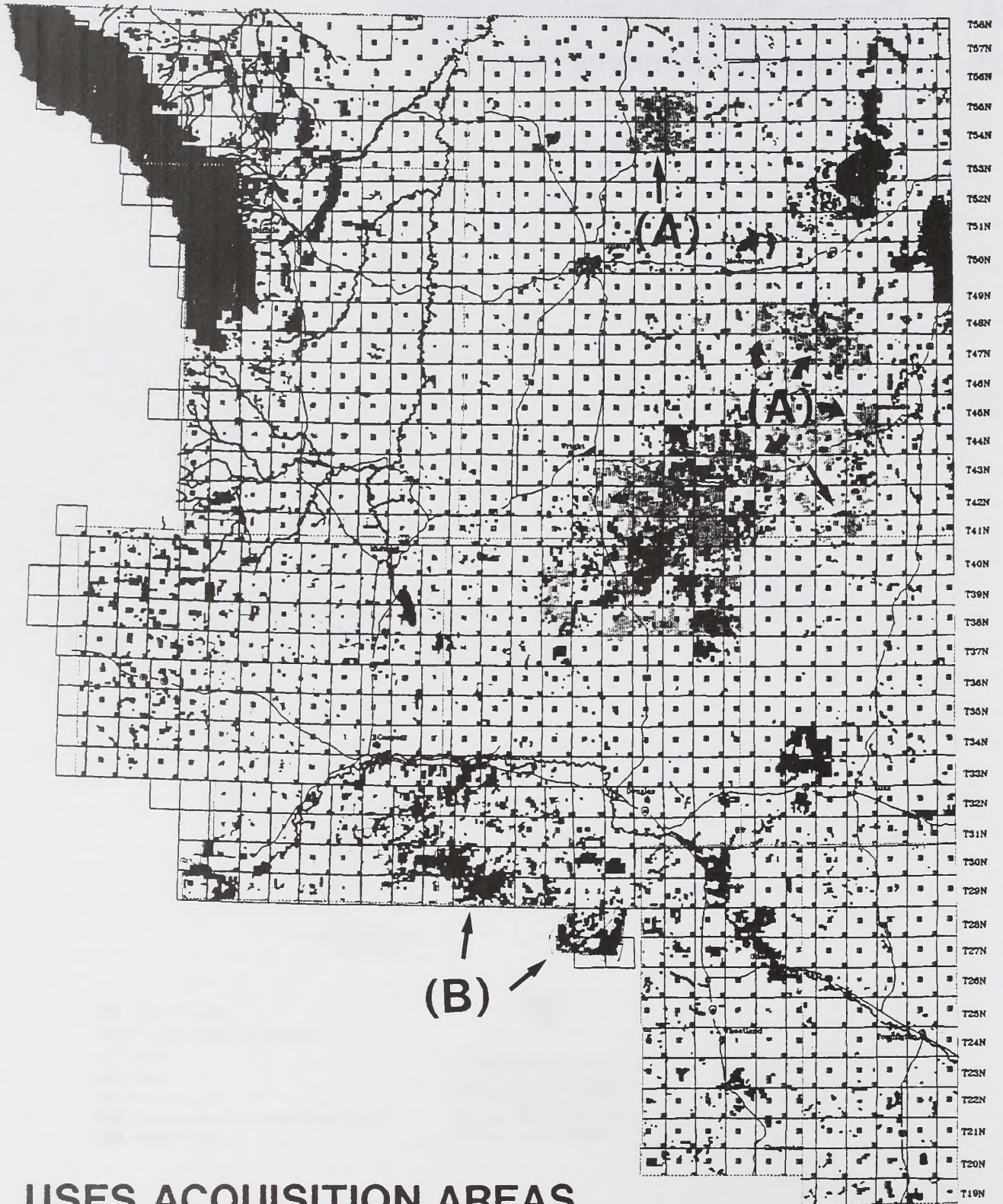
CASPER DISTRICT LAND STATUS
 Prepared by: [Name]
 Date: [Date]
 Scale: 1:100,000
 File: [File Name]

** Not in priority order

Acquisition Areas-USFS

- (A) Thunder Basin National Grasslands
- (B) Medicine Bow National Forest

R91W R90W R89W R88W R87W R86W R85W R84W R83W R82W R81W R80W R79W R78W R77W R76W R75W R74W R73W R72W R71W R70W R69W R68W R67W R66W R65W R64W R63W R62W R61W R60W



USFS ACQUISITION AREAS

APPENDIX C

WILD AND SCENIC RIVER REVIEW OF WATERWAYS IN THE NEWCASTLE RESOURCE MANAGEMENT PLAN PLANNING AREA

As part of the planning effort for developing the Newcastle RMP, the BLM planning team members reviewed all BLM-administered public land surface along waterways within the Newcastle RMP planning area (Crook, Weston and Niobrara counties). This review was to determine if any of these BLM-administered public lands met the wild and scenic rivers eligibility criteria and suitability factors, as identified in the Wild and Scenic Rivers Act (WSRA).

PUBLIC INVOLVEMENT AND COORDINATION

Wyoming BLM staff met with representatives of various Wyoming state agencies, including the Governor's office, in January 1991. These meetings were specifically for the purpose of reaching a mutual understanding of the wild and scenic rivers review process, and of the wild and scenic rivers eligibility criteria and suitability factors to be used in the process. This included some agreement on any needed refinements of these criteria and factors, specific to Wyoming, and their statewide application on BLM-administered public lands. The eligibility criteria and suitability factors, including minor refinements agreed to at that time, are still consistent with the later-released BLM Wild and Scenic Rivers Manual 8351 (May 19, 1992). At the same time, this included disagreement by state government, with giving any consideration for reviewing waterways that do not contain water year-round (for example, intermittent and ephemeral waterways). The Wyoming BLM recognizes that position but is obligated to follow the BLM manual requirement to include intermittent and ephemeral waterways in the review.

The State Director's policy and guidance statement for conducting the BLM wild and scenic rivers review process in Wyoming was issued December 31, 1992. Minor editorial refinements to this policy and guidance were made on June 29, 1993, to make the wording more consistent with BLM Manual 8351. The policy and guidance statement was again updated to reflect a December 1993 Washington office policy change concerning the inappropriate consideration of jurisdictional concerns as an eligibility criterion instead of a suitability factor.

A September 20, 1989, *Federal Register* notice included the intent to conduct a wild and scenic rivers review in the Newcastle RMP planning area.

On June 20, 1991, an open house was held at the Newcastle Resource Area office in Newcastle. Several topics discussed at the open house covered all identified issues and land use and resource management options to be addressed in the Newcastle EIS, including the wild and scenic rivers review.

On June 28, 1991, a presentation on the Newcastle wild and scenic rivers review was given to the Casper District Multiple Use Advisory Council.

On February 12, 1992, the Newcastle wild and scenic rivers review was discussed with a representative of the Sierra Club.

In July 1992, BLM personnel briefed Wyoming state agencies on the preliminary eligibility and suitability findings of the wild and scenic rivers review in the Newcastle RMP planning area. No BLM-administered public lands along waterways in the planning area were found to meet either the eligibility criteria or the suitability factors. Due to a BLM policy change, some BLM-administered public land parcels along eight waterways in the review area were found to meet the wild and scenic rivers eligibility criteria. However, these BLM-administered public lands were not found to meet the wild and scenic rivers suitability factors. Thus, the policy change did not result in any net change in the ultimate outcome of the wild and scenic rivers review in the Newcastle RMP planning area. This is explained further below. The RMP update mailed to everyone on the Newcastle mailing list discusses the change (appendix L).

General mailings were sent to the individuals, interest groups and agencies on the Newcastle Resource Area mailing list, requesting input for the development of the Newcastle RMP, throughout the RMP development process. Individuals and groups that have expressed interest in special designations or special management areas (such as wild and scenic rivers) are included on the list.

Briefings on the eligibility and suitability determinations were also given to the Wyoming Congressional delegation representatives, representatives from local government agencies, and the Crook, Weston and Niobrara County Commissioners.

PROCESS

The following definitions apply to key terms used in the WSRR process:

Waterway: A flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes. For purposes of this review, a waterway is not required to have water in it year-round and may be ephemeral or intermittent.

Public lands: The BLM-administered public land surface along waterways within an RMP planning area. Those “split estate lands,” where the land surface is state or privately owned and the federal mineral estate is administered by the BLM, are not involved with these reviews. Other references to segments, parcels, corridors, and waterways, all represent public lands, which is the basis for our review.

The BLM wild and scenic rivers review in the Newcastle RMP planning area will entail a three-step process of:

1. Determining if BLM-administered public lands along waterways meet the eligibility criteria to be tentatively classified as wild, scenic, or recreational.
2. Determining if any of those public lands that meet the eligibility criteria also meet the wild and scenic rivers suitability factors.
3. Determining how any of those public lands that meet the suitability factors will be managed to protect their outstandingly remarkable values and their tentative wild, scenic, or recreational classification.

These steps are further defined as follows:

Step I: Wild and Scenic Rivers Eligibility Criteria and Tentative Classification

To meet the eligibility criteria, a waterway must be “free-flowing” and, along with its adjacent land area, must possess one or more “outstandingly remarkable” values. As part of the eligibility review, BLM planning team members reviewed all waterways in the Newcastle RMP planning area to see if they contained any BLM-administered public lands that meet the eligibility criteria. Only those portions of waterways flowing through BLM-administered public lands were considered. The following are the guidelines used in applying the eligibility criteria on BLM-administered public land surface in the Newcastle RMP planning area.

Free-flowing. Free-flowing is defined in the WSRA as “existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other

modification of the waterway.” The existence of small dams, diversion works, or other minor structures at the time the river segment is being considered shall not automatically disqualify it for possible addition to the WSRS. A river need not be “boatable or floatable” in order to be eligible; there is no “minimum flow” requirement.

Outstandingly Remarkable Values. The BLM-administered public land surface along waterways must also possess one or more outstandingly remarkable values to be eligible for further consideration. Outstandingly remarkable values relate to scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar resource values.

The term “outstandingly remarkable value” is not precisely defined in the WSRA. However, these values must be directly waterway related. The criteria for outstandingly remarkable values, used for the review of BLM-administered public land surface in the Newcastle RMP planning area, are as follows:

Scenic: The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions. Additional factors such as seasonal variations in vegetation, scale of cultural modifications, and length of time negative intrusions are viewed can also be considered when analyzing scenic values. Scenery and visual attractions may be highly diverse over the majority of the BLM-administered public land surface involved; are not common to other waterways in the area; and must be of a quality to attract visitors from outside the area.

Recreational: Recreational opportunities on the BLM-administered public land surface are unique enough to attract visitors from outside the area. Visitors would be willing to travel long distances to use the waterway resources on the public lands for recreational purposes. Waterway related opportunities could include, but are not limited to, sight-seeing, wildlife observation, camping, photography, hiking, fishing, hunting, and boating.

Interpretive opportunities may be exceptional and attract visitors from outside the area. The waterway may provide settings for national or regional commercial usage or competitive events.

Geologic: The BLM-administered public land surface provides an example(s) of a geologic feature, process, or phenomenon that is rare, unusual, or unique to the area. The feature(s) may be in an unusually active stage of development, represent a “textbook” example and/or represent a unique or

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rare combination of geologic features (for example, erosional, volcanic, glacial, and other geologic structures).

Fisheries: The fishery values on the BLM-administered public land surface may be judged on the relative merits of either fish populations or habitat, or a combination of these conditions. For example:

- a. **Populations.** The waterway or waterway segment on BLM-administered public land surface is a contributor to one of the top producers of resident, indigenous fish species, either nationally or regionally. Of particular significance may be the presence of wild or unique stocks, or populations of federally listed or candidate threatened or endangered species. Diversity of species is also important.
- b. **Habitat.** The BLM-administered public land surface is contributing to exceptionally high quality habitat for fish species indigenous to the region. Of particular significance may be habitat for federally listed or candidate threatened and endangered species.

Wildlife: Wildlife values on the BLM-administered public land surface may be judged on the relative merits of either wildlife populations or habitat, or a combination of these conditions. For example:

- a. **Populations.** The BLM-administered public land surface is contributing to populations of resident or indigenous wildlife species important in the area or nationally. Of particular significance are species considered to be unique or populations of federally listed or candidate threatened or endangered species. Diversity of species is also important.
- b. **Habitat.** The BLM-administered public land surface is contributing to exceptionally high quality habitat for wildlife species important in the area or nationally, or may provide unique habitat or a critical link in habitat conditions for federally listed or candidate threatened or endangered species. Adjacent habitat conditions are such that the biological needs of the species are met.

Cultural: The BLM-administered public land surface contains examples of outstanding cultural sites which have unusual characteristics relating to prehistoric or historic use. Sites may be important in the area or nationally for interpreting prehistory or history; may be rare and represent an area where a culture or cultural period was first identified

and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare or sacred purposes.

Historical: The BLM-administered public land surface contains a site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare, unusual, or unique in the area.

Note: Eligibility for inclusion in the National Register of Historic Places, by itself, is not sufficient justification for being considered outstandingly remarkable.

Similar Values: Other values may include significant hydrologic, paleontologic, botanic, scientific, or ecologic resources as long as they are waterway related.

Tentative Classification. At the same time that eligibility determinations are made, BLM-administered public lands that meet the eligibility criteria are also given a tentative classification (either wild, scenic, or recreational), as required by the Act. Tentative classification is based on the type and degree of human developments associated with the BLM-administered public lands involved and adjacent lands at the time of the review. Actual classification is a congressional legislative determination.

The tentative classifications, as used by BLM in Wyoming, are further defined as follows:

Wild Waterway Areas: Wild areas are those where the waterways or sections of waterways on the BLM-administered public land surface are free of impoundments and generally inaccessible except by trail with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America. Wild means undeveloped; roads, dams, or diversion works are generally absent from a ¼-mile corridor on both sides of the waterway.

Scenic Waterway Areas: Scenic areas are those where the waterways or sections of waterways on the BLM-administered public land surface are generally free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. Scenic does not necessarily mean the waterway corridor has to have scenery as an outstandingly remarkable value; however, it means the waterway or waterway segment may contain more development (except for major dams or

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diversion works) than a wild segment and less development than a recreational segment. For example, roads may cross the waterway in places but generally do not run parallel to it. In certain cases, however, if a parallel road is unpaved and well-screened from the waterway by vegetation or a hill for example, it could qualify for scenic classification.

Recreational Waterway Areas: Recreational areas are those where the waterways or sections of waterways on the BLM-administered public land surface are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. Parallel roads or railroads, or the existence of small dams or diversions, can be allowed in this classification. A recreational area classification does not imply that the waterway or section of waterway on the public land surface will be managed or have priority for recreational use or development.

Results of the Wild and Scenic Rivers Eligibility Review for the Newcastle RMP Planning Area

The Newcastle wild and scenic rivers review team met on October 9, 10, 11, 22, and 23, 1992, to conduct the preliminary eligibility review for the waterways in the Newcastle RMP planning area.

Because of the broad interpretation of the “free flowing” criterion, all waterways reviewed were assumed to be free-flowing. Using an interdisciplinary approach, these waterways were further reviewed to determine whether any BLM-administered public lands along their courses contained any of the outstandingly remarkable values described in the eligibility criteria. Of the 226 waterways reviewed in the RMP planning area, the BLM-administered lands along 218 of the waterways were found to not have outstandingly remarkable values and were dropped from further consideration.

Pursuant to BLM Manual 8351 (May 19, 1992), an additional eligibility criterion, the “Jurisdictional Considerations” criterion, was established. This new criterion provided that, where the BLM-administered public land surface represents less than 40% of the shoreline in a waterway or waterway segment being reviewed, the BLM-administered public land surface involved will be considered to be ineligible for further consideration. In considering this new criterion, 19 BLM-administered public land parcels, scattered along the remaining 8 of the waterways reviewed (Beaver Creek, West Plum Creek, Blacktail Canyon, Belle Fourche River, Inyan

Kara Creek, Whoopup Creek, Cave Springs Creek, and Bear Run Creek) were found to not meet the eligibility criteria. Subsequently, this jurisdictional eligibility criterion policy was rescinded (BLM Washington Office Instruction Memorandum No. 94-69, December 3, 1993), because jurisdictional considerations (administrative role or presence) are factors of suitability, rather than eligibility criteria, and are more appropriately addressed in the suitability determination phase of the review process. As a result, the 19 parcels of BLM-administered public lands along the remaining 8 waterways mentioned above were found to meet the wild and scenic rivers eligibility criteria.

Attachment A (Wild and Scenic Rivers Eligibility Review) shows the waterways containing BLM-administered public lands that were reviewed and the eligibility determinations made for the public lands involved.

Attachment B and Table B (waterway segment identification and classification) describe the involved public lands in more detail and show the tentative classification (either wild, scenic, or recreational) given to each of the BLM-administered public land parcels that meet the eligibility criteria.

Step II: Wild and Scenic Rivers Suitability Factors

Any BLM-administered public lands that are found to meet the eligibility criteria and that are classified (wild, scenic, or recreational) are further reviewed to determine if they meet the wild and scenic rivers suitability factors. The suitability determinations are made after the general public, local, state and federal governments and agencies, and other interested parties have reviewed the eligibility and classification determinations.

Some factors to be considered in making the suitability determinations include, but are not limited to:

1. Characteristics which do or do not make the BLM-administered public lands a worthy addition to the WSRs.
2. Status of landownership, minerals (surface and subsurface), use in the area, including the amount of private land involved, and associated or incompatible uses. Jurisdictional consideration (administrative role and or presence) must be taken into account, to the extent that management would be affected. Refer to BLM Manual 8351.33A2 (as amended on December 22, 1993) for additional information and details on the consideration of this suitability factor.
3. Reasonably foreseeable potential use of the BLM-administered public lands and related waters which

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would be enhanced, foreclosed, or curtailed if they were included in the WSRS, and the values which could be foreclosed or diminished if the BLM-administered public lands are not protected as part of the system.

4. Public, state, local, tribal, or federal interest in designation or nondesignation of any part or all of the waterway involved, including the extent to which the administration of any or all of the waterway, including costs thereof, may be shared by state, local, or other agencies and individuals.
5. Estimated cost of acquiring necessary lands and interests in lands and of administering the area if it is added to the WSRS. Section 6 of the WSRA outlines policies and limitations of acquiring lands or interests in land by donation, exchange, consent of owners, easement, transfer, assignment of rights, or condemnation within and outside established river boundaries.
6. Ability of the BLM to manage and/or protect the BLM-administered public lands involved as a WSR or other mechanisms (existing or potential) to protect identified values other than WSR designation.
7. Historical or existing rights which would be adversely affected. In the suitability review, adequate consideration will be given to rights held by other landowners and applicants, lessees, claimants, or authorized users of the BLM-administered public lands involved.
8. Other issues and concerns, if any.

Results of the Wild and Scenic Rivers Suitability Review for the Newcastle RMP Planning Area

Due to the jurisdictional considerations policy change mentioned above, a suitability review was conducted on the BLM-administered public lands determined to meet the eligibility criteria (BLM lands along Beaver Creek, West Plum Creek, Blacktail Canyon, Belle Fourche River, Inyan Kara Creek, Whoopup Creek, Cave Springs Creek, and Bear Run Creek) to determine whether or not they meet the wild and scenic rivers suitability factors. The Newcastle WSR preliminary suitability determinations were made based on an internal BLM screening of the above eight factors. Both in-house knowledge and comments received from the general public were used to make these determinations. Much of the public input received during the eligibility phase involved discussion

of suitability factors. This input proved very valuable in helping the BLM to make the preliminary suitability determinations. All parties who participated in the eligibility review process were notified of the preliminary suitability determinations by mail and were afforded the opportunity to comment. Specialists determined that none of the BLM-administered public lands involved met the suitability factors; therefore, they will not be considered for inclusion in the WSRS. Attachment C (Wild and Scenic Rivers Suitability Review) summarizes the waterways, containing BLM-administered public lands, that were reviewed and the suitability determinations made for the public lands involved.

Step III: Management of BLM-administered Public Lands That Meet the Suitability Factors

Because there were no BLM-administered public lands found to meet the suitability factors, step III of the review process (described below) is not applicable to, and was not conducted as part of the wild and scenic rivers review process in the Newcastle RMP planning area. It is described here for informational purposes only. Management of the BLM-administered public lands involved will be included within the provisions of the general planning and management decisions of the Newcastle RMP.

BLM land use planning decisions are developed and implemented for any BLM-administered public lands along waterways that are determined to meet the suitability factors. These planning decisions are made in the RMP and include management objectives, management actions, and appropriate allocations of land and resource uses that would maintain the outstandingly remarkable values and tentative wild and scenic waterway classifications identified on the BLM-administered public lands involved.

BLM-administered public lands that are determined to meet the suitability factors would then be managed under the BLM's land use plan management decisions indefinitely. At some time in the future, it is possible that the Secretary of the Interior may direct the BLM to participate in the development of wild and scenic river study reports. The results and documentation of the BLM wild and scenic river reviews for the RMP planning area would be used in developing any such reports.

Attachment C summarizes the wild and scenic rivers suitability review conducted for the Newcastle RMP planning area.

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ATTACHMENT A NEWCASTLE RESOURCE AREA WILD AND SCENIC RIVERS ELIGIBILITY REVIEW

County	Segment Number	Name of Waterway	Township	Range	Section	Quarter-quarter	Quarter	Free Flowing?	Outstandingly Remarkable Values?
Niobrara	S1	Cheyenne River	39 N	62 W.	01	NW	SE	Yes	No
Niobrara	S2	Cheyenne River	41 N.	67 W.	26	SE	NW	Yes	No
Niobrara	S3	Antelope Creek	38 N.	62 W.	25	SW	SW	Yes	No
Niobrara	S4	Black Tail Creek	37 N.	61 W.	19	SW	SW	Yes	No
Niobrara	S5	Indian Creek	35 N.	60 W.	27	NE	—	Yes	No
Niobrara	S6	Stream	36 N.	65 W.	27	SE	SE	Yes	No
Niobrara	S8	Cow Creek	38 N.	66 W.	07	NE	SE	Yes	No
Niobrara	S9	Cow Creek	38 N.	66 W.	09	SE	NW	Yes	No
Niobrara	S10	Little Cow Creek	38 N.	67 W.	24	SE	—	Yes	No
Niobrara	S11	Spring Creek	39 N.	65 W.	34	—	—	Yes	No
Niobrara	S12	South Greasewood Creek	39 N.	64 W.	34	NW	—	Yes	No
Niobrara	S13	Dixon Draw	40 N.	65 W.	15	NE	—	Yes	No
Niobrara	S14	Snyder Creek	40 N.	65 W.	30	SW	—	Yes	No
Niobrara	S15	Snyder Creek	40 N.	65 W.	30	NE	SE	Yes	No
Niobrara	S16	Snyder Creek	40 N.	65 W.	29	NE	NW	Yes	No
Niobrara	S17	Stream	39 N.	65 W.	12	NE	NE	Yes	No
Niobrara	S18	Snyder Creek	40 N.	65 W.	23	NW	NE	Yes	No
Niobrara	S19	Robbers Roost Creek	40 N.	61 W.	09	NW	NW	Yes	No
Niobrara	S20	Stream	40 N.	60 W.	08	SW	NW	Yes	No
Weston	S21	Stream	45 N.	63 W.	04	SW	—	Yes	No
Weston	S22	Stream	45 N.	63 W.	04	SW	SW	Yes	No
Weston	S23	Stream	45 N.	63 W.	04	SW	SE	Yes	No
Weston	S24	Stream	45 N.	63 W.	08	SE	—	Yes	No
Weston	S25	Poison Creek	46 N.	63 W.	30	NW	—	Yes	No
Weston	S26	Beaver Creek	46 N.	63 W.	30	SW	—	Yes	No
Weston	S27	Beaver Creek	46 N.	63 W.	31	NW	NW	Yes	No
Weston	S28	Beaver Creek	46 N.	64 W.	23	SE	SE	Yes	No
Weston	S29	Beaver Creek	46 N.	64 W.	23	SE	SE	Yes	No
Weston	S30	Beaver Creek	42 N.	61 W.	07	NW	NE	Yes	No
Weston	S31	Beaver Creek	42 N.	61 W.	06	SW	NW	Yes	No
Weston	S32	Beaver Creek	42 N.	61 W.	06	SW	SW	Yes	No
Weston	S33	Stream	46 N.	64 W.	15	NE	—	Yes	No
Weston	S34	Beaver Creek	47 N.	60 W.	03	NW	—	Yes	Yes
Weston	S35	West Plum Creek	46 N.	62 W.	27	SE	SW	Yes	Yes
Weston	S36	West Plum Creek	46 N.	62 W.	27	SE	SW	Yes	Yes
Weston	S37	Blacktail Canyon	46 N.	62 W.	15	SE	NW	Yes	Yes
Weston	S38	Lone Tree Creek	45 N.	67 W.	05	NE	—	Yes	No
Weston	S39	Stream	45 N.	67 W.	04	SE	SE	Yes	No
Weston	S40	South Beaver Creek	43 N.	62 W.	28	SW	NW	Yes	No
Weston	S41	South Beaver Creek	43 N.	62 W.	29	—	—	Yes	No
Weston	S42	Stream	41 N.	61 W.	13	SW	—	Yes	No
Weston	S43	Blacktail Creek	43 N.	61 W.	21	NE	NE	Yes	No
Crook	S44	No. Fork Little Mo. Rv.	57 N.	67 W.	34	NE	SE	Yes	No
Crook	S45	No. Fork Little Mo. Rv.	57 N.	68 W.	35	NW	NE	Yes	No
Crook	S46	No. Fork Little Mo. Rv.	57 N.	66 W.	33	NW	NE	Yes	No
Crook	S47	Belle Fourche River	53 N.	66 W.	25	NW	—	Yes	Yes
Crook	S48	Belle Fourche River	53 N.	66 W.	26	SE	—	Yes	Yes
Crook	S49	Belle Fourche River	55 N.	64 W.	13	SW	NE	Yes	Yes
Crook	S50	Belle Fourche River	57 N.	63 W.	13	SW	NE	Yes	Yes
Crook	S51	Stream	57 N.	61 W.	02	SW	NE	Yes	No
Crook	S52	Gaff Creek	57 N.	64 W.	03	NE	SE	Yes	No
Crook	S53	Holben Creek	58 N.	64 W.	33	NW	SW	Yes	No
Crook	S54	Boggy Creek	57 N.	63 W.	19	SW	NW	Yes	No
Crook	S55	Prickly Pear Creek	57 N.	66 W.	21	SE	SW	Yes	No
Crook	S56	Short Creek	58 N.	66 W.	30	NE	NE	Yes	No
Crook	S57	Thompson Creek	58 N.	65 W.	29	SE	NE	Yes	No
Crook	S58	Stream	53 N.	67 W.	25	NW	NW	Yes	No
Crook	S59	Buffalo Creek	49 N.	67 W.	31	NE	SW	Yes	No

APPENDIX C

ATTACHMENT A (continued) NEWCASTLE RESOURCE AREA WILD AND SCENIC RIVERS ELIGIBILITY REVIEW

County	Segment Number	Name of Waterway	Township	Range	Section	Quarter-quarter	Quarter	Free Flowing?	Outstandingly Remarkable Values?
Crook	S60	Buffalo Creek	49 N.	67 W.	31	NE	SW	Yes	No
Crook	S61	Cold Springs Creek	50 N.	61 W.	32	NE	NE	Yes	No
Crook	S62	Cold Springs Creek	50 N.	61 W.	32	NE	NE	Yes	No
Crook	S63	Cold Springs Creek	51 N.	61 W.	09	SE	SE	Yes	No
Crook	S64	Inyan Kara Creek	50 N.	64 W.	35	SW	SE	Yes	Yes
Crook	S65	Little Mitchell Creek	52 N.	68 W.	07	NE	SW	Yes	No
Crook	S66	Little Mitchell Creek	52 N.	68 W.	07	NE	SE	Yes	No
Crook	S67	Gammon Prong Creek	57 N.	67 W.	20	SW	SE	Yes	No
Crook	S68	Stream	49 N.	66 W.	33	SW	SE	Yes	No
Crook	S69	West Fork Wind Creek	49 N.	66 W.	33	SE	SW	Yes	No
Crook	S70	West Fork Wind Creek	49 N.	66 W.	33	NW	—	Yes	No
Crook	S71	Stream	49 N.	66 W.	17	SW	SE	Yes	No
Crook	S72	Stream	52 N.	68 W.	04	NW	—	Yes	No
Crook	S73	Stream	52 N.	68 W.	05	SW	SW	Yes	No
Crook	S74	Stream	52 N.	68 W.	07	NE	NW	Yes	No
Crook	S75	Stream	52 N.	68 W.	06	NW	NE	Yes	No
Crook	S76	Stream	51 N.	67 W.	18	NE	SW	Yes	No
Crook	S77	Stream	53 N.	67 W.	03	SW	NE	Yes	No
Crook	S78	Stream	53 N.	66 W.	30	NW	NW	Yes	No
Crook	S79	Stream	53 N.	68 W.	31	NW	—	Yes	No
Crook	S80	Stream	52 N.	66 W.	05	NE	SW	Yes	No
Crook	S81	Stream	52 N.	66 W.	05	NW	—	Yes	No
Crook	S82	Stream	52 N.	66 W.	24	SE	NE	Yes	No
Crook	S83	Stream	51 N.	66 W.	01	SW	—	Yes	No
Crook	S84	Tomcat Creek	50 N.	65 W.	32	NE	—	Yes	No
Crook	S85	Stream	50 N.	65 W.	32	NE	NW	Yes	No
Crook	S86	Stream	50 N.	65 W.	31	SE	—	Yes	No
Crook	S88	Stream	50 N.	64 W.	06	SE	NE	Yes	No
Crook	S89	Stream	50 N.	64 W.	06	SE	—	Yes	No
Crook	S90	Houston Creek	50 N.	64 W.	06	SE	NW	Yes	No
Crook	S91	Stream	50 N.	64 W.	07	NE	—	Yes	No
Crook	S92	Stream	49 N.	64 W.	02	NW	NW	Yes	No
Crook	S93	Stream	52 N.	62 W.	31	SW	NW	Yes	No
Crook	S94	Stream	52 N.	61 W.	13	SW	SW	Yes	No
Crook	S95	Stream	49 N.	65 W.	07	NE	SE	Yes	No
Crook	S96	Stream	49 N.	65 W.	07	NE	SE	Yes	No
Crook	S97	Stream	54 N.	68 W.	25	NW	NW	Yes	No
Crook	S98	Stream	54 N.	68 W.	25	NE	NW	Yes	No
Crook	S99	Stream	49 N.	68 W.	34	NE	SE	Yes	No
Crook	S100	Stream	54 N.	61 W.	06	NE	SW	Yes	No
Crook	S101	Stream	54 N.	61 W.	06	NE	NW	Yes	No
Crook	S102	Stream	54 N.	61 W.	06	—	—	Yes	No
Crook	S103	Stream	54 N.	61 W.	07	NE	SW	Yes	No
Crook	S104	Stream	54 N.	61 W.	07	NE	SW	Yes	No
Crook	S105	Stream	49 N.	65 W.	21	SW	SW	Yes	No
Crook	S106	Stream	56 N.	68 W.	23	SW	NW	Yes	No
Crook	S107	Stream	56 N.	68 W.	21	NE	SE	Yes	No
Crook	S108	Stream	56 N.	68 W.	03	SW	NW	Yes	No
Crook	S109	No. Fork Little Mo. Rv.	57 N.	67 W.	31	SE	NW	Yes	No
Crook	S110	Stream	57 N.	67 W.	05	SE	—	Yes	No
Crook	S111	Moulton Creek	58 N.	67 W.	28	NE	NE	Yes	No
Crook	S112	Stream	58 N.	67 W.	27	SW	—	Yes	No
Crook	S113	Stream	58 N.	67 W.	34	SW	—	Yes	No
Crook	S114	Stream	57 N.	67 W.	23	—	—	Yes	No
Crook	S115	Battle Creek	57 N.	67 W.	15	SW	SW	Yes	No
Crook	S116	Battle Creek	57 N.	67 W.	15	SW	SW	Yes	No
Crook	S117	Stream	57 N.	67 W.	27	SW	NW	Yes	No
Crook	S118	Gammon Prong Creek	57 N.	67 W.	28	SE	SE	Yes	No

APPENDIX C

ATTACHMENT A (continued) NEWCASTLE RESOURCE AREA WILD AND SCENIC RIVERS ELIGIBILITY REVIEW

County	Segment Number	Name of Waterway	Township	Range	Section	Quarter-quarter	Quarter	Free Flowing?	Outstandingly Remarkable Values?
Crook	S119	Little Missouri River	56 N.	66 W.	20	NW	NW	Yes	No
Crook	S120	T L Creek	56 N.	66 W.	20	NW	NW	Yes	No
Crook	S121	Mule Creek	56 N.	67 W.	25	SW	NE	Yes	No
Crook	S122	Mule Creek	56 N.	67 W.	25	SW	SE	Yes	No
Crook	S123	Carrie Nation Creek	55 N.	67 W.	06	SE	SW	Yes	No
Crook	S124	Stream	56 N.	67 W.	19	NW	—	Yes	No
Crook	S125	Stream	56 N.	67 W.	30	NE	NE	Yes	No
Crook	S126	Stream	56 N.	67 W.	15	NW	—	Yes	No
Crook	S127	Stream	56 N.	67 W.	15	SW	—	Yes	No
Crook	S128	Stream	56 N.	67 W.	15	SE	NE	Yes	No
Crook	S129	Little Missouri River	56 N.	66 W.	18	SE	SE	Yes	No
Crook	S130	Little Piney Creek	49 N.	65 W.	14	SE	SE	Yes	No
Crook	S131	Willow Creek	49 N.	65 W.	14	SE	SE	Yes	No
Crook	S132	Deep Draw	49 N.	65 W.	23	SW	—	Yes	No
Crook	S133	Willow Creek	49 N.	65 W.	23	NE	—	Yes	No
Crook	S134	Deep Draw	49 N.	65 W.	25	NW	—	Yes	No
Crook	S135	Willow Creek	49 N.	65 W.	23	SE	—	Yes	No
Crook	S136	Green River	49 N.	65 W.	26	SE	SE	Yes	No
Crook	S137	Willow Creek	49 N.	65 W.	25	SW	SW	Yes	No
Crook	S138	Stream	56 N.	67 W.	11	SE	SW	Yes	No
Crook	S139	Stream	56 N.	67 W.	02	SE	SE	Yes	No
Crook	S140	Stream	56 N.	67 W.	01	SW	—	Yes	No
Crook	S141	Stream	56 N.	67 W.	01	SW	—	Yes	No
Crook	S142	Cedar Creek	56 N.	67 W.	01	NW	SW	Yes	No
Crook	S143	Cedar Creek	56 N.	67 W.	01	NW	NW	Yes	No
Crook	S144	Bush Creek	56 N.	66 W.	05	NE	—	Yes	No
Crook	S145	Cedar Creek	56 N.	67 W.	02	SE	—	Yes	No
Crook	S146	No. Fork Little Mo. Rv.	56 N.	67 W.	02	NE	NW	Yes	No
Crook	S147	Stream	56 N.	67 W.	10	NE	NE	Yes	No
Crook	S148	Cedar Creek	56 N.	67 W.	10	SE	—	Yes	No
Crook	S149	Stream	56 N.	67 W.	10	SE	—	Yes	No
Crook	S150	Stream	56 N.	67 W.	10	SW	—	Yes	No
Crook	S151	Cedar Creek	56 N.	67 W.	10	SW	—	Yes	No
Crook	S152	Stream	56 N.	67 W.	05	NE	SE	Yes	No
Crook	S153	Stream	56 N.	67 W.	05	NW	—	Yes	No
Crook	S154	Stream	56 N.	67 W.	08	NW	—	Yes	No
Crook	S155	Driscoll Creek	56 N.	67 W.	08	NW	—	Yes	No
Crook	S156	Stream	56 N.	67 W.	07	NE	—	Yes	No
Crook	S157	Storm Draw	57 N.	66 W.	29	SE	—	Yes	No
Crook	S158	Stream	57 N.	67 W.	25	NW	NE	Yes	No
Crook	S159	North Battle Creek	57 N.	67 W.	23	NE	—	Yes	No
Crook	S160	Stream	57 N.	66 W.	18	SE	NE	Yes	No
Crook	S161	North Draw	57 N.	66 W.	18	NE	—	Yes	No
Crook	S162	Stream	57 N.	66 W.	05	SW	SE	Yes	No
Crook	S163	Stream	57 N.	66 W.	05	SE	SW	Yes	No
Crook	S164	Craft Draw	57 N.	66 W.	05	SW	—	Yes	No
Crook	S165	Craft Draw	57 N.	66 W.	05	SW	—	Yes	No
Crook	S166	Strand Draw	57 N.	66 W.	21	NE	—	Yes	No
Crook	S167	No. Fork Little Mo. Rv.	57 N.	66 W.	27	SW	NW	Yes	No
Crook	S168	Prickly Pear Creek	57 N.	66 W.	27	NW	SW	Yes	No
Crook	S169	Stream	56 N.	66 W.	23	NE	—	Yes	No
Crook	S170	Stream	56 N.	66 W.	23	NE	—	Yes	No
Crook	S171	Stream	57 N.	65 W.	15	SE	NE	Yes	No
Crook	S172	Stream	57 N.	65 W.	15	SE	—	Yes	No
Crook	S173	Stream	57 N.	65 W.	11	SE	SE	Yes	No
Crook	S174	Stream	57 N.	65 W.	08	NW	NE	Yes	No
Crook	S175	Bronco John Creek	57 N.	65 W.	35	NW	SW	Yes	No
Crook	S176	Stream	56 N.	65 W.	02	SW	SE	Yes	No

APPENDIX C

ATTACHMENT A (continued) NEWCASTLE RESOURCE AREA WILD AND SCENIC RIVERS ELIGIBILITY REVIEW

County	Segment Number	Name of Waterway	Township	Range	Section	Quarter-quarter	Quarter	Free Flowing?	Outstandingly Remarkable Values?
Crook	S177	Lindsey Creek	56 N.	65 W.	11	SW	NE	Yes	No
Crook	S178	Lindsey Creek	56 N.	65 W.	11	NW	—	Yes	No
Crook	S179	Stream	57 N.	65 W.	35	SE	NW	Yes	No
Crook	S180	Stream	57 N.	65 W.	02	NW	—	Yes	No
Crook	S181	Stream	57 N.	65 W.	02	NE	SW	Yes	No
Crook	S182	Sage Creek	57 N.	65 W.	02	NE	SE	Yes	No
Crook	S183	Sage Creek	57 N.	65 W.	01	SW	—	Yes	No
Crook	S184	Stream	57 N.	65 W.	01	SW	SE	Yes	No
Crook	S185	Little Missouri River	57 N.	65 W.	29	NW	NE	Yes	No
Crook	S186	Little Missouri River	56 N.	66 W.	17	NW	NW	Yes	No
Crook	S187	Little Missouri River	56 N.	66 W.	17	NW	NW	Yes	No
Crook	S188	Little Missouri River	56 N.	66 W.	17	NW	NW	Yes	No
Crook	S189	Little Missouri River	56 N.	66 W.	17	NW	SW	Yes	No
Crook	S190	Stream	58 N.	66 W.	29	SW	NW	Yes	No
Crook	S191	Stream	58 N.	65 W.	30	NW	—	Yes	No
Crook	S192	Stream	58 N.	65 W.	30	NE	NE	Yes	No
Crook	S193	Stream	58 N.	65 W.	19	SE	SE	Yes	No
Crook	S194	Stream	58 N.	65 W.	30	SW	—	Yes	No
Crook	S195	Stream	58 N.	65 W.	30	SW	—	Yes	No
Crook	S196	Stream	58 N.	65 W.	32	SW	NW	Yes	No
Crook	S197	Stream	58 N.	65 W.	32	NE	NE	Yes	No
Crook	S198	Stream	58 N.	65 W.	28	SW	—	Yes	No
Crook	S199	Stream	56 N.	66 W.	29	NE	SE	Yes	No
Crook	S200	Stream	56 N.	66 W.	28	SW	—	Yes	No
Crook	S201	Dinky Creek	56 N.	66 W.	28	NE	NE	Yes	No
Crook	S202	Stream	56 N.	66 W.	27	NW	—	Yes	No
Crook	S203	Stream	55 N.	66 W.	15	SE	NE	Yes	No
Niobrara	S204	Twentyone Draw	40 N.	60 W.	06	SE	—	Yes	No
Niobrara	S205	Twentyone Draw	40 N.	60 W.	08	NW	—	Yes	No
Crook	S206	Stream	56 N.	65 W.	18	SE	NE	Yes	No
Crook	S207	Stream	56 N.	65 W.	18	NE	—	Yes	No
Crook	S208	Stream	56 N.	65 W.	07	SE	NE	Yes	No
Crook	S209	Big Draw	56 N.	65 W.	05	NE	—	Yes	No
Crook	S210	Stream	57 N.	65 W.	33	NE	NW	Yes	No
Crook	S211	Stream	57 N.	65 W.	33	NW	NW	Yes	No
Crook	S212	Stream	57 N.	65 W.	32	NE	—	Yes	No
Crook	S213	Gaff Creek	57 N.	64 W.	02	SW	SW	Yes	No
Crook	S214	Stream	57 N.	64 W.	14	NW	NW	Yes	No
Crook	S215	Gaff Creek	57 N.	64 W.	14	NW	—	Yes	No
Crook	S216	Stream	57 N.	64 W.	22	NE	NW	Yes	No
Crook	S217	Stream	57 N.	64 W.	15	SE	SW	Yes	No
Crook	S218	Stream	58 N.	61 W.	30	NW	—	Yes	No
Crook	S219	Stream	58 N.	61 W.	25	SE	NE	Yes	No
Niobrara	S220	Owl Creek	40 N.	66 W.	08	SE	SE	Yes	No
Niobrara	S221	Owl Creek	41 N.	66 W.	31	SE	—	Yes	No
Niobrara	S222	Stream	40 N.	66 W.	04	NE	NE	Yes	No
Niobrara	S223	Fred Draw	41 N.	66 W.	27	NW	SE	Yes	No
Niobrara	S224	Stream	40 N.	67 W.	24	NE	SE	Yes	No
Niobrara	S225	West Bull Creek	39 N.	67 W.	26	NE	NE	Yes	No
Niobrara	S226	Little Cow Creek	38 N.	66 W.	20	SW	NE	Yes	No
Niobrara	S227	Stream	39 N.	65 W.	35	SW	NW	Yes	No
Niobrara	S228	Dogie Creek	39 N.	66 W.	08	SE	—	Yes	No
Niobrara	S229	Stream	39 N.	66 W.	08	SE	NE	Yes	No
Niobrara	S230	Stream	39 N.	66 W.	17	SE	NE	Yes	No
Niobrara	S231	Snyder Creek	39 N.	66 W.	06	SE	—	Yes	No
Niobrara	S232	Snyder Creek	40 N.	66 W.	33	SW	—	Yes	No
Niobrara	S233	Stream	40 N.	66 W.	33	SW	NW	Yes	No
Niobrara	S234	Stream	38 N.	64 W.	05	SE	—	Yes	No

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ATTACHMENT A (continued) NEWCASTLE RESOURCE AREA WILD AND SCENIC RIVERS ELIGIBILITY REVIEW

County	Segment Number	Name of Waterway	Township	Range	Section	Quarter-quarter	Quarter	Free Flowing?	Outstandingly Remarkable Values?
Niobrara	S235	Stream	38 N.	64 W.	05	SE	—	Yes	No
Niobrara	S236	Stream	39 N.	64 W.	27	SW	NE	Yes	No
Niobrara	S237	Stream	39 N.	64 W.	27	SW	NW	Yes	No
Niobrara	S238	Stream	39 N.	65 W.	13	SW	SW	Yes	No
Niobrara	S239	Stream	39 N.	65 W.	25	SE	—	Yes	No
Niobrara	S240	Boggy Creek	39 N.	64 W.	17	NW	—	Yes	No
Niobrara	S241	Stream	39 N.	64 W.	05	SW	SE	Yes	No
Niobrara	S242	Stream	39 N.	64 W.	08	SE	SW	Yes	No
Niobrara	S243	Stream	40 N.	65 W.	25	SW	—	Yes	No
Niobrara	S244	Stream	40 N.	64 W.	32	SW	SE	Yes	No
Niobrara	S245	Stream	40 N.	65 W.	13	NW	NW	Yes	No
Niobrara	S246	Stream	40 N.	65 W.	13	SE	—	Yes	No
Niobrara	S247	Stream	40 N.	64 W.	17	SW	NE	Yes	No
Niobrara	S248	Snyder Creek	40 N.	64 W.	21	NW	NE	Yes	No
Niobrara	S249	Stream	39 N.	63 W.	28	SW	—	Yes	No
Niobrara	S250	Stream	39 N.	63 W.	27	NE	NW	Yes	No
Niobrara	S251	Stream	39 N.	63 W.	27	NE	NE	Yes	No
Niobrara	S252	N. Greasewood Creek	39 N.	64 W.	25	NW	—	Yes	No
Niobrara	S253	Stream	38 N.	63 W.	06	SW	—	Yes	No
Niobrara	S254	N. Greasewood Creek	39 N.	63 W.	32	SE	NE	Yes	No
Niobrara	S255	Stream	38 N.	63 W.	05	NW	—	Yes	No
Niobrara	S256	Seven Mile Creek	40 N.	63 W.	22	NE	NW	Yes	No
Niobrara	S257	Rock Corral Draw	40 N.	63 W.	01	SE	—	Yes	No
Niobrara	S258	Rock Corral Draw	40 N.	62 W.	05	NE	SW	Yes	No
Niobrara	S259	Trout Draw	40 N.	62 W.	05	NW	NW	Yes	No
Niobrara	S260	Mercer Draw	37 N.	66 W.	07	NE	—	Yes	No
Niobrara	S261	Stream	37 N.	66 W.	05	SE	SE	Yes	No
Niobrara	S262	Stream	38 N.	66 W.	33	NW	—	Yes	No
Niobrara	S263	Stream	38 N.	65 W.	31	SE	—	Yes	No
Niobrara	S264	Stream	37 N.	66 W.	12	SE	NE	Yes	No
Niobrara	S265	Cow Creek	38 N.	65 W.	28	NE	NE	Yes	No
Niobrara	S266	Twenty Mile Gulch	36 N.	66 W.	02	SW	SE	Yes	No
Niobrara	S267	Twenty Mile Gulch	36 N.	66 W.	14	NE	—	Yes	No
Niobrara	S268	Stream	36 N.	66 W.	09	NE	NW	Yes	No
Niobrara	S269	Mikes Draw	36 N.	66 W.	17	SW	—	Yes	No
Niobrara	S270	Stream	36 N.	67 W.	11	SE	NW	Yes	No
Niobrara	S271	Stream	5 N.	65 W.	04	SE	SE	Yes	No
Weston	S272	Oil Creek	43 N.	62 W.	23	—	—	Yes	No
Weston	S273	Oil Creek	44 N.	62 W.	35	—	—	Yes	No
Weston	S274	Oil Creek	46 N.	62 W.	15	NW	SW	Yes	No
Weston	S275	Four Mile Draw	46 N.	62 W.	14	—	—	Yes	No
Weston	S276	Whoopup Creek	43 N.	60 W.	06	SE	NW	Yes	Yes
Weston	S277	Whoopup Creek	43 N.	60 W.	20	—	—	Yes	Yes
Weston	S278	Whoopup Creek	43 N.	60 W.	21	—	—	Yes	Yes
Weston	S279	Whoopup Creek	43 N.	60 W.	28	—	—	Yes	Yes
Weston	S280	Whoopup Creek	43 N.	60 W.	29	—	—	Yes	Yes
Weston	S281	Whoopup Creek	43 N.	60 W.	33	—	—	Yes	Yes
Weston	S282	Whoopup Creek	44 N.	60 W.	31	SE	NE	Yes	Yes
Weston	S283	Cave Springs Creek	45 N.	61 W.	18	—	—	Yes	Yes
Weston	S284	Cave Springs Creek	45 N.	61 W.	19	—	—	Yes	Yes
Weston	S285	Beaver Creek Tributary	42 N.	61 W.	32	N1/2	—	Yes	No
Weston	S286	Bear Run Creek	46 N.	60 W.	09	—	—	Yes	Yes
Weston	S287	Thompson Canyon Creek	46 N.	60 W.	34	—	—	Yes	No
Weston	S288	N. Thompson Canyon Ck.	46 N.	60 W.	27	—	—	Yes	No
Weston	S289	N. Thompson Canyon Ck.	46 N.	60 W.	28	—	—	Yes	No
Weston	S290	Sherwood Canyon Creek	45 N.	60 W.	09	—	—	Yes	No
Weston	S291	Sherwood Canyon Ck. Trb.	45 N.	60 W.	08	—	—	Yes	No
Weston	S292	Sheldon Canyon Ck. Trb.	45 N.	60 W.	20	—	—	Yes	No

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ATTACHMENT A (continued) NEWCASTLE RESOURCE AREA WILD AND SCENIC RIVERS ELIGIBILITY REVIEW

County	Segment Number	Name of Waterway	Township	Range	Section	Quarter-quarter	Quarter	Free Flowing?	Outstandingly Remarkable Values?
Weston	S293	Sheldon Canyon Ck. Trb.	45 N.	60 W.	21	—	—	Yes	No
Weston	S294	Stotts Canyon Creek	46 N.	60 W.	15	—	—	Yes	No
Weston	S295	Hay Creek	46 N.	67 W.	34	—	—	Yes	No
Weston	S296	Kinney Canyon Creek	45 N.	60 W.	05	—	—	Yes	No
Weston	S297	Kinney Canyon Creek	45 N.	60 W.	06	—	—	Yes	No
Weston	S298	Cedar Draw Creek	44 N.	60 W.	09	—	—	Yes	No
Weston	S299	Cedar Draw Creek Tribs.	44 N.	60 W.	04	—	—	Yes	No
Weston	S300	Cedar Draw Creek Tribs.	44 N.	60 W.	08	—	—	Yes	No
Weston	S301	Hay Creek	41 N.	60 W.	05	E½	—	Yes	No
Weston	S302	Line Creek	43 N.	60 W.	33	—	—	Yes	No
Weston	S303	Rats Valley Creek	45 N.	60 W.	18	—	—	Yes	No
Weston	S304	Rats Valley Creek	45 N.	61 W.	13	—	—	Yes	No
Weston	S305	Rats Valley Creek	45 N.	61 W.	24	—	—	Yes	No
Weston	S306	Sheep Creek & Tribs.	41 N.	61 W.	05	—	—	Yes	No
Weston	S307	Stream	48 N.	68 W.	25	—	—	Yes	No
Weston	S308	Stream	48 N.	68 W.	26	—	—	Yes	No
Weston	S309	Stream	47 N.	68 W.	01	—	—	Yes	No
Weston	S310	Stream	47 N.	68 W.	02	—	—	Yes	No
Weston	S311	Stream	47 N.	68 W.	04	—	—	Yes	No
Weston	S312	Stream	47 N.	68 W.	09	—	—	Yes	No
Weston	S313	Stream	47 N.	68 W.	14	—	—	Yes	No
Weston	S314	Stream	47 N.	68 W.	16	—	—	Yes	No
Weston	S315	Stream	47 N.	67 W.	17	—	—	Yes	No
Weston	S316	Stream	47 N.	67 W.	18	—	—	Yes	No
Weston	S317	Stream	47 N.	60 W.	09	—	—	Yes	No
Weston	S318	Stream	47 N.	60 W.	34	—	—	Yes	No
Weston	S319	Stream	46 N.	30 W.	multiple	—	—	Yes	No
Weston	S320	Stream	41 N.	61 W.	17	—	—	Yes	No
Niobrara	S321	21 Draw Creek & Tribs.	40 N.	60 W.	06	—	—	Yes	No
Niobrara	S322	21 Draw Creek & Tribs.	40 N.	60 W.	07	—	—	Yes	No
Niobrara	S323	21 Draw Creek & Tribs.	40 N.	60 W.	08	—	—	Yes	No

APPENDIX C

ATTACHMENT B

IDENTIFICATION AND CLASSIFICATION OF BLM-ADMINISTERED PUBLIC LANDS ALONG THE WATERWAYS DETERMINED TO MEET THE WILD AND SCENIC RIVERS ELIGIBILITY CRITERIA

SEGMENT OF WATERWAY REVIEWED

INYAN KARA CREEK

Inyan Kara Creek flows for approximately 21½ linear miles. Less than ¼ mile of the creek flows across public land administered by the BLM from its origin to its confluence with the Belle Fourche River. The public land portion lies in a scenic creek bottom in rolling terrain. The riparian zone includes deciduous trees and shrubs. The BLM-administered portion of the stream is not large enough to preserve the outstanding values of the area.

WHOOPIE CREEK AND TRIBUTARIES

The Whoopie Creek drainage and its tributaries on public land pass through varied terrain along the foothills of Elk Mountain, a part of the Black Hills of South Dakota and Wyoming. The creek itself has been dry for several years; the tributaries are intermittent, flowing only when snowmelt and heavy rains occur. The main drainage of Whoopie Creek passes through Whoopie Canyon, a steep-walled scenic canyon. There is no public access to any segments of Whoopie Creek and only limited foot access to the public land along its tributaries. A portion of the public land along Whoopie Creek is managed as part of an ACEC for other values, and to protect the character of the drainage. The scattered parcels and intermittent landownership do not lend themselves to management as a component of the WSR system.

CAVE SPRINGS CREEK

Cave Springs Creek drainage is approximately 3 miles long of which approximately 1 mile crosses BLM-administered public land. The drainage passes through broken terrain with deciduous trees and shrubs in a portion of the riparian zone and grassland in the remainder of the area. There is no public access. Scenic and historic values are not threatened. Public land management has only a minor influence on the character of the area. The public land segments alone do not contain the most significant historic or scenic values on the stream. Due to the small amount of public land and the lack of threats to values, the area is not recommended as suitable for inclusion in the WSR system.

BEAR RUN CREEK

Bear Run Creek traverses approximately 5 miles of which approximately ¾ mile is on BLM-administered public land. This is an extremely rough and steep area in the foothills of the Black Hills of South Dakota and Wyoming. The BLM segment in itself is not manageable for any purposes other than its current uses which are recreation, potential timber management, and limited livestock grazing. Adjacent private lands have been subdivided and developed as seasonal home sites. Public access is by foot only.

WEST PLUM CREEK

West Plum Creek flows for approximately 10½ linear miles. BLM-administered public land occurs in two parcels totalling ¾ mile in length. The area is in scenic pine-covered, steep terrain. The creek bottom meanders and has shrubs and deciduous trees along a portion of its length. Due to the small amount of public land and the scattered ownership pattern the public land segments are not recommended for inclusion as part of the WSR system.

BLACKTAIL CANYON CREEK

Blacktail Canyon Creek flows for approximately 4 linear miles with approximately ¼ mile crossing BLM-administered public land. The area is in the foothills of the Black Hills of South Dakota and Wyoming and crosses rugged steep terrain with pine-covered slopes and shrubs and deciduous trees in the riparian zone. Due to the small amount of public land this segment is not recommended for inclusion in the WSR system.

BELLE FOURCHE RIVER

The Belle Fourche River flows for approximately 75 linear miles in the resource area with less than 2½ miles in four segments crossing BLM-administered public land. Only one parcel has public access. The Belle Fourche River flows through varied terrain changing from grass-shrub rangeland to steep pine-covered terrain with cottonwoods and willows in the riparian zone and grading back to grassland. Leafy spurge, a noxious

APPENDIX C

weed, has become established and is at infestation levels along several segments both on public and private land. While the length of the river can be considered highly scenic and passes through Devils Tower National Monument, the public land segments are separated and do not contribute enough river distance to justify inclusion in the WSR system.

STOCKADE BEAVER CREEK

The public land segment (approximately ¼ mile) on Stockade Beaver Creek has been transferred to Weston County under the provisions of the Recreation and Public Purposes Act and is no longer in federal ownership. The area is currently being managed by Weston County as part of a county recreation site.

TABLE B
IDENTIFICATION AND TENTATIVE CLASSIFICATION OF BLM-ADMINISTERED PUBLIC LAND PARCELS
THAT MEET THE WILD AND SCENIC RIVERS ELIGIBILITY CRITERIA

PARCEL NUMBER	MILEAGE ACROSS PUBLIC LAND	NAME AND LOCATION OF WATERWAY	DISTANCE TO NEXT PUBLIC LAND PARCEL	DESCRIPTION AND VALUES OF PUBLIC LAND PARCEL	PRELIMINARY CLASSIFICATION OF PUBLIC LAND PARCEL
INYAN KARA CREEK					
1(S64)	<1/8	T. 50 N., R. 64 W., section 35, SWSE	single parcel	Wide creek bot-tom; riparian zone includes deciduous trees and shrubs; scenic setting.	scenic
WHOOPIE CREEK					
S1(S276)	3/8	T. 43 N., R. 60 W., section 6, SENW	1/4 mile to S7	Dry creek bed in canyon; steep walls, few cotton-wood trees; scattered shrubs.	recreation scenic
S2(S277)	3/8	T. 43 N., R. 60 W., section 20	1/2 mile to S2	Intermittent stream; tributary to Whoopie Creek; broken ter-rain with scattered pine and juniper. No public access.	recreation scenic
S3(S278)	1/4	T. 43 N., R. 60 W., section 21	1/2 mile to S2 and S4	Intermittent stream; tributary to Whoopie Creek; broken ter-rain with scattered pine and juniper. Foot access only.	recreation scenic
S4(S279)	1/2	T. 43 N., R. 60 W., section 28	1 mile from S2	Tributary to Whoopie Creek; broken terrain through moderate to steep hills. Foot access only.	recreation scenic

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WHOOPUP CREEK (continued)					
S5 (S280)	1/2	T. 43 N., R. 60 W., section 29	1 mile from S2	Tributary to Whoopup Creek; broken terrain through moderate to steep hills. Foot access only.	recreation scenic
S6(S281)	1	T. 43 N., R. 60 W., section 33	1 air mile from S5	Deep canyon with shrubs and scattered pine and juniper, choke-cherry, and few deciduous trees in bottom. Inter-mittant stream. Foot access only.	recreation scenic
S7	3/8	T. 44 N., R. 60 W., section 31, SENE	1/4 mile to S1	Steep-walled nar-row canyon with shrubs, cotton-wood and juniper in bottom. No water in channel for several years. No public access.	recreation scenic
CAVE SPRINGS CREEK					
S1(S283)	3/4	T. 45 N., R. 61 W., section 18	adjacent to S2	Small canyon; in-termittant stream, deciduous trees and shrubs in bot-tom. Surrounded by shrub grass-land. No access.	recreation scenic
S2(S284)	1/4	T. 45 N., R. 61 W., section 19	adjacent to S1	Small canyon; in-termittant stream, deciduous trees and shrubs in bot-tom. Surrounded by shrub grass-land. No access.	recreation scenic
BEAR RUN CREEK					
S1(S286)	3/8	T. 46 N., R. 60 W., section 9	single parcel	Rugged, steep ter-rain; pine-covered hills; narrow ri-parian zone. Dif-ficult foot access only.	recreation scenic

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STOCKADE BEAVER CREEK					
This parcel is no longer in federal ownership; transferred to Weston County under provisions of the Recreation and Public Purposes Act. Currently managed as part of county recreation site.					
WEST PLUM CREEK					
S1(S35)	1/4	T. 46 N., R. 62 W., section 27, SWSE	1/2 mile	Scenic pine- covered steep ter-rain; meandering creek bottom with shrubs and decid-uous trees.	scenic
S2(S36)	1/8	T. 46 N., R. 62 W., section 27, NWNE	1/2 mile	Scenic pine- covered steep ter-rain; meandering creek bottom with shrubs and decid-uous trees.	scenic
BLACKTAIL CANYON CREEK					
S1(S37)	1/4	T. 46 N., R. 62 W., section 15, SENW	single parcel	Rugged steep-pine covered slopes; creek bottom with shrubs and decid-uous trees.	scenic recreational
BELLE FOURCHE RIVER					
S1(S47)	3/8	T. 53 N., R. 66 W., section 25, NW	1/2 mile to S2	Timbered slopes, wide flood plain, cottonwood ripar-ian zone, leafy spurge infestation. No access.	recreation scenic
S2(S48)	<1/8	T. 53 N., R. 66 W., section 26, SE	1/2 mile to S1, ap- proximately 15 air miles to S3	Timbered slopes, wide flood plain, cottonwood ripar-ian zone, leafy spurge infestation, no access.	recreation scenic
S3(S49)	1/2 to 3/8	T. 55 N., R. 64 W., section 13, SWNE	approximately 13 air miles	Steep red rock cliffs to river bottom; wide grassy bottom abutting cliff.	recreation scenic
S4(S50)	1/4	T. 57 N., R. 63 W., section 13, SWNE	approximately 13 air miles to S3	Broad cottonwood riparian zone grad-ing into prairie. No access.	recreation scenic

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ATTACHMENT C NEWCASTLE RESOURCE AREA WILD AND SCENIC RIVERS SUITABILITY REVIEW NEWCASTLE RESOURCE AREA

WATERWAY REVIEWED	TOTAL LENGTH (miles)	TOTAL BLM LENGTH (miles)	DETERMINATION	RATIONALE ^{a/}
West Plum Creek	~10½	¾	unsuitable	1, 2
Blacktail Canyon Creek	~4	¼	unsuitable	1, 2
Belle Fourche River	~75	<2⅛	unsuitable	1, 2, 3
Inyan Kara Creek	~13	<⅛	unsuitable	1, 2
Cave Springs Creek	~3	1	unsuitable	1, 2
Bear Run Creek	~5	¾	unsuitable	1, 2
Whoopup Creek	~13	3¾	unsuitable	1, 2, 4
Stockade Beaver Creek		No longer in federal ownership		

^{a/} Rationale codes:

- 1 – Not manageable due to small percent of federal ownership.
- 2 – Federal ownership not enough to preserve outstanding values without adjacent nonfederal lands.
- 3 – Conflicting management goals on federal, private, and state ownership.
- 4 – Currently portions managed as special management area for other values.

APPENDIX D

THE PLANNING PROCESS

The process for the development, approval, maintenance, and amendment or revision of the RMPs and their associated EISs was initiated under the authority of section 202(f) of FLPMA and section 202(c) of NEPA. The process is guided by BLM planning regulations in 43 CFR 1600 and the CEQ regulations in 40 CFR 1500. The steps used in the planning process are described below.

STEP 1: IDENTIFICATION OF ISSUES

Step 1 is intended to identify resource management problems, conflicts, or opportunities that can be resolved through the planning process.

A *Federal Register* notice was published, a scoping letter was sent to interested parties, and an open house was held to gain public input into identifying land and resource use, management problems, conflicts, or opportunities in the planning area. In addition, a letter was also sent to 17 Native American individuals and tribes (appendix L). The preliminary issues the BLM identified were included in this scoping letter. Along with the general public, other federal agencies and state and local governments were also asked to participate in the issue identification process. The BLM combined the information from these and internal sources into five planning issues that could be resolved through the RMP EIS process.

STEP 2: DEVELOPMENT OF PLANNING CRITERIA

Step 2 involved development of criteria to identify the standards, guidelines, and constraints that would apply to the planning process. These criteria are the “sideboards” that were applied by the specialists so that their work was focused on resolution of the issues. The original criteria were made available to interested parties for review.

STEP 3: INVENTORY AND DATA COLLECTION

Step 3 allowed for the collection of various kinds of issue-related resource, environmental, social, and economic data. During this phase, current information was collected on resource values in the planning area to supplement existing information in resource area files.

STEP 4: ANALYSIS OF THE MANAGEMENT SITUATION

The MSA supports all subsequent steps in planning. Each specialist on the interdisciplinary team was involved in preparing the MSA. The MSA included a physical profile and brief description of each resource as well as the current management situation describing current management practices by resource and the status of on-going programs. This section provided the basis for the description of the No Action Alternative and the basis for the planning issues. It also provided the analysis of future demands which identified present and future capabilities, problems, and conflicts of current management. The MSA is on file at the NRA office.

STEP 5: FORMULATION OF ALTERNATIVES

Five alternatives were developed by the interdisciplinary team. These alternatives, described in chapter 2 of the each Draft RMP EIS, include the No Action Alternative (continuation of current management) and the Preferred Alternative. The alternatives represent a choice of management actions to achieve goals, and they provide for resource use and environmental protection.

STEP 6: ANALYSIS OF ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES

The physical, biological, social, and economical effects of implementing each alternative were assessed. This step is the environmental impact analysis required by NEPA. The analysis is presented in chapter 4.

STEP 7: SELECTION OF THE PREFERRED MANAGEMENT PLAN

Selection of the preferred management plan will be based on public input and coordination, current BLM management policies and directions, and analysis of each alternative.

STEP 8: SELECTION OF THE PROPOSED RESOURCE MANAGEMENT PLAN

Based on the results of public review and comment on the Draft RMP EIS, a Proposed RMP will be selected and published with a final EIS. The selection and

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approval of the RMP is made after a 30-day protest period on the proposed plan. Any person who participated in the planning process and who has an interest which is or may be adversely affected by adoption of the plan may protest its approval. A protest may raise only those issues which were submitted for the record during the planning process.

STEP 9: MONITORING AND EVALUATION

This step involves monitoring the selected plan. The results of implementing the plan will be evaluated to determine the planning action's effectiveness. Monitoring may result in revisions to the plan.

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WYOMING BLM MITIGATION GUIDELINES FOR SURFACE-DISTURBING AND DISRUPTIVE ACTIVITIES

INTRODUCTION

These guidelines are primarily for the purpose of attaining statewide consistency in how requirements are determined for avoiding and mitigating environmental impacts and resource and land use conflicts. Consistency in this sense does not mean that identical requirements would be applied for all similar types of land use activities that may cause similar types of impacts. Nor does it mean that the requirements or guidelines for a single land use activity would be identical in all areas.

There are two ways the mitigation guidelines are used in the RMP EIS process: (1) as part of the planning criteria in developing the RMP alternatives, and (2) in the analytical processes of both developing the alternatives and analyzing the impacts of the alternatives. In the first case, an assumption is made that any one or more of the mitigations will be appropriately included as conditions of relevant actions being proposed or considered in each alternative. In the second case, the mitigations are used (1) to develop a baseline for measuring and comparing impacts among the alternatives; (2) to identify other actions and alternatives that should be considered, and (3) to help determine whether more stringent or less stringent mitigations should be considered.

The EIS for the RMP does not decide or dictate the exact wording or inclusion of these guidelines. Rather, the guidelines are used in the RMP EIS process as a tool to help develop the RMP alternatives and to provide a baseline for comparative impact analysis in arriving at RMP decisions. These guidelines will be used in the same manner in analyzing activity plans and other site-specific proposals. These guidelines and their wording are matters of policy. As such, specific wording is subject to change primarily through administrative review, not through the RMP EIS process. Any further changes that may be made in the continuing refinement of these guidelines and any development of program-specific standard stipulations will be handled in another forum, including appropriate public involvement and input.

PURPOSE

The purpose of the "Wyoming BLM Mitigation Guidelines" are (1) to reserve, for the BLM, the right to modify the operations of all surface and other human presence disturbance activities as part of the statutory requirements for environmental protection, and (2) to inform a potential lessee, permittee, or operator of the requirements that must be met when using BLM-administered

public lands. These guidelines have been written in a format that will allow for (1) their direct use as stipulations, and (2) the addition of specific or specialized mitigation following the submission of a detailed plan of development or other project proposal, and an environmental analysis.

Those resource activities or programs currently without a standardized set of permit or operation stipulations can use the mitigation guidelines as stipulations or as conditions of approval, or as a baseline for developing specific stipulations for a given activity or program.

Because use of the mitigation guidelines was integrated into the RMP EIS process and will be integrated into the site-specific environmental analysis process, the application of stipulations or mitigation requirements derived through the guidelines will provide more consistency with planning decisions and plan implementation than has occurred in the past. Application of the mitigation guidelines to all surface and other human presence disturbance activities concerning BLM-administered public lands and resources will provide more uniformity in mitigation than has occurred in the past.

MITIGATION GUIDELINES

1. Surface Disturbance Mitigation Guideline

Surface disturbance will be prohibited in any of the following areas or conditions. Exception, waiver, or modification of this limitation may be approved in writing, including documented supporting analysis, by the Authorized Officer.

- a. Slopes in excess of 25 percent.
- b. Within important scenic areas (Class I and II Visual Resource Management Areas).
- c. Within 500 feet of surface water and/or riparian areas.
- d. Within either one-quarter mile or the visual horizon (whichever is closer) of historic trails.
- e. Construction with frozen material or during periods when the soil material is saturated or when watershed damage is likely to occur.

Guidance

The intent of the SURFACE DISTURBANCE MITIGATION GUIDELINE is to inform interested parties (potential lessees, permittees, or operators) that when

one or more of the five (1a through 1e) conditions exist, surface-disturbing activities will be prohibited unless or until a permittee or his designated representative and the surface management agency (SMA) arrive at an acceptable plan for mitigation of anticipated impacts. This negotiation will occur prior to development.

Specific criteria (e.g., 500 feet from water) have been established based upon the best information available. However, such items as geographical areas and seasons must be delineated at the field level.

Exception, waiver, or modification of requirements developed from this guideline must be based upon environmental analysis of proposals (e.g., activity plans, plans of development, plans of operation, applications for permit to drill) and, if necessary, must allow for other mitigation to be applied on a site-specific basis.

2. Wildlife Mitigation Guideline

- a. To protect important big game winter habitat, activities or surface use will not be allowed from November 15 to April 30 within certain areas encompassed by the authorization. The same criteria apply to defined big game birthing areas from May 1 to June 30.

Application of this limitation to operation and maintenance of a developed project must be based on environmental analysis of the operational or production aspects.

Exception, waiver, or modification of this limitation in any year may be approved in writing, including documented supporting analysis, by the Authorized Officer.

- b. To protect important raptor and/or sage and sharp-tailed grouse nesting habitat, activities or surface use will not be allowed from February 1 to July 31 within certain areas encompassed by the authorization. The same criteria apply to defined raptor and game bird winter concentration areas from November 15 to April 30.

Application of this limitation to operation and maintenance of a developed project must be based on environmental analysis of the operational or production aspects.

Exception, waiver, or modification of this limitation in any year may be approved in writing, including documented supporting analysis, by the Authorized Officer.

- c. No activities or surface use will be allowed on that portion of the authorization area identified within (legal description) for the purpose of protecting (e.g., sage/sharp-tailed grouse breeding grounds, and/or other species/activities) habitat.

Exception, waiver, or modification of this limitation in any year may be approved in writing, including documented supporting analysis, by the Authorized Officer.

- d. Portions of the authorized use area legally described as (legal description), are known or suspected to be essential habitat for (name) which is a threatened or endangered species. Prior to conducting any onsite activities, the lessee/permittee will be required to conduct inventories or studies in accordance with BLM and U.S. Fish and Wildlife Service guidelines to verify the presence or absence of this species. In the event that (name) occurrence is identified, the lessee/permittee will be required to modify operational plans to include the protection requirements of this species and its habitat (e.g., seasonal use restrictions, occupancy limitations, facility design modifications).

Guidance

The WILDLIFE MITIGATION GUIDELINE is intended to provide two basic types of protection: seasonal restriction (2a and 2b) and prohibition of activities or surface use (2c). Item 2d is specific to situations involving threatened or endangered species. Legal descriptions will ultimately be required and should be measurable and legally definable. There are no minimum subdivision requirements at this time. The area delineated can and should be defined as necessary, based upon current biological data, prior to the time of processing an application and issuing the use authorization. The legal description must eventually become a part of the condition for approval of the permit, plan of development, and/or other use authorization.

The seasonal restriction section identifies three example groups of species and delineates three similar time frame restrictions. The big game species including elk, moose, deer, antelope, and bighorn sheep, all require protection of crucial winter range between November 15 and April 30. Elk and bighorn sheep also require protection from disturbance from May 1 to June 30, when they typically occupy distinct calving and lambing areas. Raptors include eagles, accipiters, falcons (peregrine, prairie, and merlin), buteos (ferruginous and Swainson's hawks), osprey, and burrowing owls. The raptors and sage and sharp-tailed grouse require nesting protection between February 1 and July 31. The same birds often require protection from disturbance from November 15 through April 30 while they occupy winter concentration areas.

Item 2c, the prohibition of activity or surface use, is intended for protection of specific wildlife habitat areas or values within the use area that cannot be protected by using seasonal restrictions. These areas or values must

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be factors that limit life-cycle activities (e.g., sage grouse strutting grounds, known threatened and endangered species habitat).

Exception, waiver, or modification of requirements developed from this guideline must be based upon environmental analysis of proposals (e.g., activity plans, plans of development, plans of operation, applications for permit to drill) and, if necessary, must allow for other mitigation to be applied on a site-specific basis.

3. Cultural Resource Mitigation Guideline

When a proposed discretionary land use has potential for affecting the characteristics which qualify a cultural property for the National Register of Historic Places (National Register), mitigation will be considered. In accordance with Section 106 of the Historic Preservation Act, procedures specified in 36 CFR 800 will be used in consultation with the Wyoming State Historic Preservation Officer and the Advisory Council on Historic Preservation in arriving at determinations regarding the need and type of mitigation to be required.

Guidance

The preferred strategy for treating potential adverse effects on cultural properties is "avoidance." If avoidance involves project relocation, the new project area may also require cultural resource inventory. If avoidance is imprudent or unfeasible, appropriate mitigation may include excavation (data recovery), stabilization, monitoring, protection barriers and signs, or other physical and administrative measures.

Reports documenting results of cultural resource inventory, evaluation, and the establishment of mitigation alternatives (if necessary) shall be written according to standards contained in BLM Manuals, the cultural resource permit stipulations, and in other policy issued by the BLM. These reports must provide sufficient information for Section 106 consultation. Reports shall be reviewed for adequacy by the appropriate BLM cultural resource specialist. If cultural properties on, or eligible for, the National Register are located within these areas of potential impact and cannot be avoided, the Authorized Officer shall begin the Section 106 consultation process in accordance with the procedures contained in 36 CFR 800.

Mitigation measures shall be implemented according to the mitigation plan approved by the BLM Authorized Officer. Such plans are usually prepared by the land use applicant according to BLM specifications. Mitigation plans will be reviewed as part of Section 106 consultation for National Register eligible or listed properties. The extent and nature of recommended mitigation shall

be commensurate with the significance of the cultural resource involved and the anticipated extent of damage. Reasonable costs for mitigation will be borne by the land use applicant. Mitigation must be cost effective and realistic. It must consider project requirements and limitations, input from concerned parties, and be BLM approved or BLM formulated.

Mitigation of paleontological and natural history sites will be treated on a case-by-case basis. Factors such as site significance, economics, safety, and project urgency must be taken into account when making a decision to mitigate. Authority to protect (through mitigation) such values is provided for in FLPMA, Section 102(a)(8). When avoidance is not possible, appropriate mitigation may include excavation (data recovery), stabilization, monitoring, protection barriers and signs, or other physical and administrative protection measures.

4. Special Resource Mitigation Guideline

To protect (resource value), activities or surface use will not be allowed (i.e., within a specific distance of the resource value or between date to date) in (legal description).

Application of this limitation to operation and maintenance of a developed project must be based on environmental analysis of the operational or production aspects.

Exception, waiver, or modification of this limitation in any year may be approved in writing, including documented supporting analysis, by the Authorized Officer.

Example Resource Categories (select or identify category and specific resource value):

- a. Recreation areas.
- b. Special natural history or paleontological features.
- c. Special management areas.
- d. Sections of major rivers.
- e. Prior existing rights-of-way.
- f. Occupied dwellings.
- g. Other (specify).

Guidance

The SPECIAL RESOURCE MITIGATION GUIDELINE is intended for use only in site-specific situations where one of the first three general mitigation guidelines will not adequately address the concern. The resource value, location, and specific restrictions must be clearly identified. A detailed plan addressing specific mitigation and special restrictions will be required prior to distur-

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bance or development and will become a condition for approval of the permit, plan of development, or other use authorization.

Exception, waiver, or modification of requirements developed from this guideline must be based upon environmental analysis of proposals (e.g., activity plans, plans of development, plans of operation, applications for permit to drill) and, if necessary, must allow for other mitigation to be applied on a site-specific basis.

5. No Surface Occupancy Guideline

No Surface Occupancy will be allowed on the following described lands (legal description) because of (resource value).

Example Resource Categories (select or identify category and specific resource value):

- a. Recreation Areas (e.g., campgrounds, historic trails, national monuments).
- b. Major reservoirs/dams.
- c. Special management area (e.g., known threatened or endangered species habitat, areas suitable for consideration for wild and scenic rivers designation).
- d. Other (specify).

Guidance

The NO SURFACE OCCUPANCY (NSO) MITIGATION GUIDELINE is intended for use only when other mitigation is determined insufficient to adequately protect the public interest and is the only alternative to “no development” or “no leasing.” The legal description and resource value of concern must be identified and be tied to an NSO land use planning decision.

Waiver of, or exception(s) to, the NSO requirement will be subject to the same test used to initially justify its

imposition. If, upon evaluation of a site-specific proposal, it is found that less restrictive mitigation would adequately protect the public interest or value of concern, then a waiver or exception to the NSO requirement is possible. The record must show that because conditions or uses have changed, less restrictive requirements will protect the public interest. An environmental analysis must be conducted and documented (e.g., environmental assessment, environmental impact statement, etc., as necessary) in order to provide the basis for a waiver or exception to an NSO planning decision. Modification of the NSO requirement will pertain only to refinement or correction of the location(s) to which it applied. If the waiver, exception, or modification is found to be consistent with the intent of the planning decision, it may be granted. If found inconsistent with the intent of the planning decision, a plan amendment would be required before the waiver, exception, or modification could be granted.

When considering the “no development” or “no leasing” option, a rigorous test must be met and fully documented in the record. This test must be based upon stringent standards described in the land use planning document. Since rejection of all development rights is more severe than the most restrictive mitigation requirement, the record must show that consideration was given to development subject to reasonable mitigation, including “no surface occupancy.” The record must also show that other mitigation was determined to be insufficient to adequately protect the public interest. A “no development” or “no leasing” decision should not be made solely because it appears that conventional methods of development would be unfeasible, especially where an NSO restriction may be acceptable to a potential permittee. In such cases, the potential permittee should have the opportunity to decide whether or not to go ahead with the proposal (or accept the use authorization), recognizing that an NSO restriction is involved.

APPENDIX F

STANDARDS FOR HEALTHY RANGELANDS

AND

GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT

FOR

PUBLIC LANDS ADMINISTERED BY THE BUREAU OF LAND MANAGEMENT IN THE STATE OF WYOMING

AUGUST 12, 1997

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Washington, DC 20240

In Reply Refer To:
4180 (220)

MEMORANDUM

To: The Secretary

Through: ^{For} Bob Armstrong *[Signature]* AUG 12 1997
Assistant Secretary, Land and Minerals Management

From: Director, Bureau of Land Management *Peter Sheen*

Subject: Approval of Wyoming Standards and Guidelines

In accordance with 43 CFR 4180.2(b), the Bureau of Land Management Wyoming State Director is submitting the attached Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Secretarial approval. The standards and guidelines have been reviewed by the Departmental Review Team who found that they comply with the requirements of the regulations. The standards and guidelines were developed with full public participation and in consultation with Wyoming's State resource advisory council and are in conformance with the appropriate land use plans.

I recommend that you approve the Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management.

I concur with your recommendation and approve the Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for immediate implementation.

Approve *[Signature]* Disapprove _____
AUG 12 1997
Date _____ Date _____

Attachment

Prepared by: ext:

AUG 20 1997

<i>[Signature]</i>	SD	RP&M
<i>[Signature]</i>	ASD	MLA
	OEA	DSS
	EEO	CF
	LAW	LEAD Resp.

INTRODUCTION

According to the Department of the Interior's final rule for grazing administration, effective August 21, 1995, the Wyoming Bureau of Land Management (BLM) State Director is responsible for the development of standards for healthy rangelands and guidelines for livestock grazing management on 18 million acres of Wyoming's public rangelands. The development and application of these standards and guidelines are to achieve the four fundamentals of rangeland health outlined in the grazing regulations (43 CFR 4180.1). Those four fundamentals are: (1) watersheds are functioning properly; (2) water, nutrients, and energy are cycling properly; (3) water quality meets State standards; and (4) habitat for special status species is protected.

Standards address the health, productivity, and sustainability of the BLM administered public rangelands and represent the minimum acceptable conditions for the public rangelands. The standards apply to all resource uses on public lands. Their application will be determined as use-specific guidelines are developed. Standards are synonymous with goals and are observed on a landscape scale. They describe healthy rangelands rather than important rangeland by-products. The achievement of a standard is determined by observing, measuring, and monitoring appropriate indicators. An indicator is a component of a system whose characteristics (e.g., presence, absence, quantity, and distribution) can be observed, measured, or monitored based on sound scientific principles.

Guidelines provide for, and guide the development and implementation of, reasonable, responsible, and cost-effective management practices at the grazing allotment and watershed level. The guidelines in this document apply specifically to livestock grazing management practices on the BLM administered public lands. These management practices will either maintain existing desirable conditions or move rangelands toward statewide standards within reasonable timeframes. Appropriate guidelines will ensure that the resultant management practices reflect the potential for the watershed, consider other uses and natural influences, and balance resource goals with social, cultural/historic, and economic opportunities to sustain viable local communities. Guidelines, like standards, apply statewide.

Implementation of the Wyoming standards and guidelines will generally be done in the following manner. Grazing allotments or groups of allotments in a watershed will be reviewed based on the BLM's current allotment categorization and prioritization process. Allotments with existing management plans and high-priority allotments will be reviewed first. Lower priority allotments will be reviewed as time allows or when it

becomes necessary for BLM to review the permit/lease for other reasons such as permit/lease transfers, permittee/lessee requests for change in use, etc. The permittees and interested publics will be notified when allotments are scheduled for review and encouraged to participate in the review. The review will first determine if an allotment meets each of the six standards. If it does, no further action will be necessary. If any of the standards aren't being met, then rationale explaining the contributing factors will be prepared. If livestock grazing practices are found to be among the contributing factors, corrective actions consistent with the guidelines will be developed and implemented before the next grazing season in accordance with 43 CFR 4180. If a lack of data prohibits the reviewers from determining if a standard is being met, then a strategy will be developed to acquire the data in a timely manner.

On a continuing basis, the Standards for Healthy Rangelands will direct on-the-ground management on the public lands. They will serve to focus the on-going development and implementation of activity plans toward the maintenance or the attainment of healthy rangelands.

Quantifiable resource objectives and specific management practices to maintain or achieve the standards will be developed at the local BLM District and Resource Area levels and will consider all reasonable and practical options available to achieve desired results on a watershed or grazing allotment scale. The objectives shall be reflected in site-specific activity or implementation plans as well as in livestock grazing permits/leases for the public lands. These objectives and practices may be developed formally or informally through mechanisms available and suited to local needs (such as Coordinated Resource Management [CRM] efforts).

The development and implementation of standards and guidelines will enable on-the-ground management of the public rangelands to maintain a clear and responsible focus on both the health of the land and its dependent natural and human communities. This development and implementation will ensure that any mechanisms currently being employed or that may be developed in the future will maintain a consistent focus on these essential concerns. This development and implementation will also enable immediate attention to be brought to bear on existing resource concerns.

These standards and guidelines are compatible with BLM's three-tiered land use planning process. The first tier includes the laws, regulations, and policies governing BLM's administration and management of the public lands and their uses. The previously mentioned fundamentals of rangeland health specified in 43 CFR 4180.1, the requirement for BLM to develop these state (or

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regional) standards and guidelines, and the standards and guidelines themselves, are part of this first tier. Also part of this first tier are the specific requirements of various Federal laws and the objectives of 43 CFR 4100.2 that require BLM to consider the social and economic well-being of the local communities in its management process.

These standards and guidelines will provide for statewide consistency and guidance in the preparation, amendment, and maintenance of BLM land use plans, which represent the second tier of the planning process. The BLM land use plans provide general allocation decisions concerning the kinds of resource and land uses that can occur on the BLM administered public lands, where they can occur, and the types of conditional requirements under which they can occur. In general, the standards will be the basis for development of planning area-specific management objectives concerning rangeland health and productivity, and the guidelines will direct development of livestock grazing management actions to help accomplish those objectives.

The third tier of the BLM planning process, activity or implementation planning, is directed by the applicable land use plan and, therefore, by the standards and guidelines. The standards and guidelines, as BLM statewide policy, will also directly guide development of the site-specific objectives and the methods and practices used to implement the land use plan decisions. Activity or implementation plans contain objectives which describe the site-specific conditions desired. Grazing permits/leases for the public lands contain terms and conditions which describe specific actions required to attain or maintain the desired conditions. Through monitoring and evaluation, the BLM, grazing permittees, and other interested parties determine if progress is being made to achieve activity plan objectives.

Wyoming rangelands support a variety of uses which are of significant economic importance to the State and its communities. These uses include oil and gas production, mining, recreation and tourism, fishing, hunting, wildlife viewing, and livestock grazing. Rangelands also provide amenities which contribute to the quality of life in Wyoming such as open spaces, solitude, and opportunities for personal renewal. Wyoming's rangelands should be managed with consideration of the State's historical, cultural, and social development and in a manner which contributes to a diverse, balanced, competitive, and resilient economy in order to provide opportunity for economic development. Healthy rangelands can best sustain these uses.

To varying degrees, BLM management of the public lands and resources plays a role in the social and economic well-being of Wyoming communities. The National Environmental Policy Act (part of the above-mentioned first planning tier) and various other laws and regulations mandate the BLM to analyze the socioeconomic impacts of actions occurring on public rangelands. These analyses occur during the environmental analysis process of land use planning (second planning tier), where resource allocations are made, and during the environmental analysis process of activity or implementation planning (third planning tier). In many situations, factors that affect the social and economic well-being of local communities extend far beyond the scope of BLM management or individual public land users' responsibilities. In addition, since standards relate primarily to physical and biological features of the landscape, it is very difficult to provide measurable socioeconomic indicators that relate to the health of rangelands. It is important that standards be realistic and within the control of the land manager and users to achieve.

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STANDARDS FOR HEALTHY PUBLIC RANGELANDS

STANDARD #1

Within the potential of the ecological site (soil type, landform, climate, and geology), soils are stable and allow for water infiltration to provide for optimal plant growth and minimal surface runoff.

THIS MEANS THAT:

The hydrologic cycle will be supported by providing for water capture, storage, and sustained release. Adequate energy flow and nutrient cycling through the system will be achieved as optimal plant growth occurs. Plant communities are highly varied within Wyoming.

INDICATORS MAY INCLUDE BUT ARE NOT LIMITED TO:

- Water infiltration rates
- Soil compaction
- Erosion (rills, gullies, pedestals, capping)
- Soil microorganisms
- Vegetative cover (gully bottoms and slopes)
- Bare ground and litter

The above indicators are applied as appropriate to the potential of the ecological site.

STANDARD #2

Riparian and wetland vegetation has structural, age, and species diversity characteristic of the stage of channel succession and is resilient and capable of recovering from natural and human disturbance in order to provide forage and cover, capture sediment, dissipate energy, and provide for groundwater recharge.

THIS MEANS THAT:

Wyoming has highly varied riparian and wetland systems on public lands. These systems vary from large rivers to small streams and from springs to large wet meadows. These systems are in various stages of natural cycles and may also reflect other disturbance that is either localized or widespread throughout the watershed. Riparian vegetation captures sediments and associated materials, thus enhancing the nutrient cycle by capturing and utilizing nutrients that would otherwise move through a system unused.

INDICATORS MAY INCLUDE BUT ARE NOT LIMITED TO:

- Erosion and deposition rate
- Channel morphology and floodplain function
- Channel succession and erosion cycle
- Vegetative cover

- Plant composition and diversity (species, age class, structure, successional stages, desired plant community, etc.)
- Bank stability
- Woody debris and instream cover
- Bare ground and litter

The above indicators are applied as appropriate to the potential of the ecological site.

STANDARD #3

Upland vegetation on each ecological site consists of plant communities appropriate to the site which are resilient, diverse, and able to recover from natural and human disturbance.

THIS MEANS THAT:

In order to maintain desirable conditions and/or recover from disturbance within acceptable timeframes, plant communities must have the components present to support the nutrient cycle and adequate energy flow. Plants depend on nutrients in the soil and energy derived from sunlight. Nutrients stored in the soil are used over and over by plants, animals, and microorganisms. The amount of nutrients available and the speed with which they cycle among plants, animals, and the soil are fundamental components of rangeland health. The amount, timing, and distribution of energy captured through photosynthesis are fundamental to the function of rangeland ecosystems.

INDICATORS MAY INCLUDE BUT ARE NOT LIMITED TO:

- Vegetative cover
- Plant composition and diversity (species, age class, structure, successional stages, desired plant community, etc.)
- Bare ground and litter
- Erosion (rills, gullies, pedestals, capping)
- Water infiltration rates

The above indicators are applied as appropriate to the potential of the ecological site.

STANDARD #4

Rangelands are capable of sustaining viable populations and a diversity of native plant and animal species appropriate to the habitat. Habitats that support or could support threatened species, endangered species, species of special concern, or sensitive species will be maintained or enhanced.

THIS MEANS THAT:

The management of Wyoming rangelands will achieve or maintain adequate habitat conditions that support

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diverse plant and animal species. These may include listed threatened or endangered species (U.S. Fish and Wildlife-designated), species of special concern (BLM-designated), and other sensitive species (State of Wyoming-designated). The intent of this standard is to allow the listed species to recover and be delisted, and to avoid or prevent additional species becoming listed.

INDICATORS MAY INCLUDE BUT ARE NOT LIMITED TO:

- Noxious weeds
- Species diversity
- Age class distribution
- All indicators associated with the upland and riparian standards;
- Population trends
- Habitat fragmentation

The above indicators are applied as appropriate to the potential of the ecological site.

STANDARD #5

Water quality meets State standards.

THIS MEANS THAT:

The State of Wyoming is authorized to administer the Clean Water Act. BLM management actions or use authorizations will comply with all Federal and State water quality laws, rules and regulations to address water quality issues that originate on public lands. Provisions for the establishment of water quality standards are included in the Clean Water Act, as amended, and the Wyoming Environmental Quality Act, as amended. Regulations are found in Part 40 of the Code of Federal Regulations and in Wyoming's Water Quality Rules and Regulations. The latter regulations contain Quality Standards for Wyoming Surface Waters.

Natural processes and human actions influence the chemical, physical, and biological characteristics of water. Water quality varies from place to place with the seasons, the climate, and the kind substrate through which water moves. Therefore, the assessment of water quality takes these factors into account.

INDICATORS MAY INCLUDE BUT ARE NOT LIMITED TO:

- Chemical characteristics (e.g., pH, conductivity, dissolved oxygen)
- Physical characteristics (e.g., sediment, temperature, color)
- Biological characteristics (e.g., macro- and micro-invertebrates, fecal coliform, and plant and animal species)

STANDARD #6

Air quality meets State standards.

THIS MEANS THAT:

The State of Wyoming is authorized to administer the Clean Air Act. BLM management actions or use authorizations will comply with all Federal and State air quality laws, rules, regulations and standards. Provisions for the establishment of air quality standards are included in the Clean Air Act, as amended, and the Wyoming Environmental Quality Act, as amended. Regulations are found in Part 40 of the Code of Federal Regulations and in Wyoming Air Quality Standards and Regulations.

INDICATORS MAY INCLUDE BUT ARE NOT LIMITED TO:

- Particulate matter
- Sulfur dioxide
- Photochemical oxidants (ozone)
- Volatile organic compounds (hydrocarbons)
- Nitrogen oxides
- Carbon monoxide
- Odors
- Visibility

BLM WYOMING GUIDELINES FOR LIVE-STOCK GRAZING MANAGEMENT

1. Timing, duration, and levels of authorized grazing will ensure that adequate amounts of vegetative ground cover, including standing plant material and litter, remain after authorized use to support infiltration, maintain soil moisture storage, stabilize soils, allow the release of sufficient water to maintain system function, and to maintain subsurface soil conditions that support permeability rates and other processes appropriate to the site.
2. Grazing management practices will restore, maintain, or improve riparian plant communities. Grazing management strategies consider hydrology, physical attributes, and potential for the watershed and the ecological site. Grazing management will maintain adequate residual plant cover to provide for plant recovery, residual forage, sediment capture, energy dissipation, and groundwater recharge.
3. Range improvement practices (instream structures, fences, water troughs, etc.) in and adjacent to riparian areas will ensure that stream channel morphology (e.g., gradient, width/depth ratio, channel roughness and sinuosity) and functions appropriate to climate and landform are maintained or enhanced. The development of springs, seeps, or other projects affecting water and associated resources shall be designed to protect the ecological and hydrological functions, wildlife habitat, and significant cultural, historical, and archaeological values associated with the water source. Range improvements will be located away from riparian areas if they conflict with achieving or maintaining riparian function.
4. Grazing practices that consider the biotic communities as more than just a forage base will be designed in order to ensure that the appropriate kinds and amounts of soil organisms, plants, and animals to support the hydrologic cycle, nutrient cycle, and energy flow are maintained or enhanced.
5. Continuous season-long or other grazing management practices that hinder the completion of plants' life-sustaining reproductive and/or nutrient cycling processes will be modified to ensure adequate periods of rest at the appropriate times. The rest periods will provide for seedling establishment or other necessary processes at levels sufficient to move the ecological site condition toward the resource objective and subsequent achievement of the standard.
6. Grazing management practices and range improvements will adequately protect vegetative cover and physical conditions and maintain, restore, or enhance water quality to meet resource objectives. The effects of new range improvements (water developments, fences, etc.) on the health and function of rangelands will be carefully considered prior to their implementation.
7. Grazing management practices will incorporate the kinds and amounts of use that will restore, maintain, or enhance habitats to assist in the recovery of Federal threatened and endangered species or the conservation of federally-listed species of concern and other State-designated special status species. Grazing management practices will maintain existing habitat or facilitate vegetation change toward desired habitats. Grazing management will consider threatened and endangered species and their habitats.
8. Grazing management practices and range improvements will be designed to maintain or promote the physical and biological conditions necessary to sustain native animal populations and plant communities. This will involve emphasizing native plant species in the support of ecological function and incorporating the use of nonnative species only in those situations in which native plant species are not available in sufficient quantities or are incapable of maintaining or achieving properly functioning conditions and biological health.
9. Grazing management practices on uplands will maintain desired plant communities or facilitate change toward desired plant communities.

APPENDIX F

DEFINITIONS

ACTIVITY PLANS

Allotment Management Plans (AMPs), Habitat Management Plans (HMPs), Watershed Management Plans (WMPs), Wild Horse Management Plans (WHMPs), and other plans developed at the local level to address specific concerns and accomplish specific objectives.

COORDINATED RESOURCE MANAGEMENT (CRM)

A group of people working together to develop common resource goals and resolve natural resource concerns. CRM is a people process that strives for win-win situations through consensus-based decisionmaking.

DESIRED PLANT COMMUNITY

A plant community which produces the kind, proportion, and amount of vegetation necessary for meeting or exceeding the land use plan/activity plan objectives established for an ecological site(s). The desired plant community must be consistent with the site's capability to produce the desired vegetation through management, land treatment, or a combination of the two.

ECOLOGICAL SITE

An area of land with specific physical characteristics that differs from other areas both in its ability to produce distinctive kinds and amounts of vegetation and in its response to management.

EROSION

(v.) Detachment and movement of soil or rock fragments by water, wind, ice, or gravity. (n.) The land surface worn away by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

GRAZING MANAGEMENT PRACTICES

Grazing management practices include such things as grazing systems (rest-rotation, deferred rotation, etc.), timing and duration of grazing, herding, salting, etc. They do not include physical range improvements.

GUIDELINES (For Grazing Management)

Guidelines provide for, and guide the development and implementation of, reasonable, responsible, and cost-effective management actions at the allotment and watershed level which move rangelands toward statewide standards or maintain existing desirable conditions. Appropriate guidelines will ensure that the resultant management actions reflect the potential for the watershed, consider other uses and natural influences, and balance resource goals with social, cultural/historic,

and economic opportunities to sustain viable local communities. Guidelines, and therefore, the management actions they engender, are based on sound science, past and present management experience, and public input.

INDICATOR

An indicator is a component of a system whose characteristics (e.g., presence, absence, quantity, and distribution) can be observed, measured, or monitored based on sound scientific principles. An indicator can be evaluated at a site- or species-specific level. Monitoring of an indicator must be able to show change within timeframes acceptable to management and be capable of showing how the health of the ecosystem is changing in response to specific management actions. Selection of the appropriate indicators to be observed, measured, or monitored in a particular allotment is a critical aspect of early communication among the interests involved on-the-ground. The most useful indicators are those for which change or trend can be easily quantified and for which agreement as to the significance of the indicator is broad based.

LITTER

The uppermost layer of organic debris on the soil surface, essentially the freshly fallen or slightly decomposed vegetal material.

MANAGEMENT ACTIONS

Management actions are the specific actions prescribed by the BLM to achieve resource objectives, land use allocations, or other program or multiple use goals. Management actions include both grazing management practices and range improvements.

OBJECTIVE

An objective is a site-specific statement of a desired rangeland condition. It may contain either or both qualitative elements and quantitative elements. Objectives frequently speak to change. They are the focus of monitoring and evaluation activities at the local level. Monitoring of the indicators would show negative changes or positive changes. Objectives should focus on indicators of greatest interest for the area in question.

RANGE IMPROVEMENTS

Range improvements include such things as corrals, fences, water developments (reservoirs, spring developments, pipelines, wells, etc.) and land treatments (prescribed fire, herbicide treatments, mechanical treatments, etc.).

APPENDIX F

RANGELAND

Land on which the native vegetation (climax or natural potential) is predominantly grasses, grasslike plants, forbs, or shrubs. This includes lands revegetated naturally or artificially when routine management of that vegetation is accomplished mainly through manipulation of grazing. Rangelands include natural grasslands, savannas, shrublands, most deserts, tundra, alpine communities, coastal marshes, and wet meadows.

RANGELAND HEALTH

The degree to which the integrity of the soil and ecological processes of rangeland ecosystems are sustained.

RIPARIAN

An area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not have vegetation dependent on free water in the soil.

STANDARDS

Standards are synonymous with goals and are observed on a landscape scale. Standards apply to rangeland

health and not to the important by-products of healthy rangelands. Standards relate to the current capability or realistic potential of a specific site to produce these by-products, not to the presence or absence of the products themselves. It is the sustainability of the processes, or rangeland health, that produces these by-products.

TERMS AND CONDITIONS

Terms and conditions are very specific land use requirements that are made a part of the land use authorization in order to assure maintenance or attainment of the standard. Terms and conditions may incorporate or reference the appropriate portions of activity plans (e.g., Allotment Management Plans). In other words, where an activity plan exists that contains objectives focused on meeting the standards, compliance with the plan may be the only term and condition necessary in that allotment.

UPLAND

Those portions of the landscape which do not receive additional moisture for plant growth from runoff, streamflow, etc. Typically these are hills, ridgetops, valley slopes, and rolling plains.

APPENDIX G

THE FORESTRY PROGRAM

OVERVIEW

This appendix was developed to provide more information about the forestlands and the forestry program.

Forest management is directed to manage the forestlands in a healthy productive condition. To keep the forestland in a healthy productive condition, forest management activities may include forest inventories, site preparation, timber stand improvement (precommercial and commercial thinning), harvesting mature timber, timber sale preparation and sale administration, and surveillance of forestlands for insect and disease problems.

FORESTED LAND

All land having 10% or more canopy cover per acre are classified as forestlands or woodlands. These lands are classified as either:

Commercial Forestland

Forestland (of all species of trees) which is producing or is capable of producing 20 cubic feet per acre per year.

Wood and Noncommercial Forestlands

Land which is not capable of yielding at least 20 cubic feet of wood per acre, per year of sawtimber tree species, or land which is capable of producing only nonsawtimber tree species.

FOREST MANAGEMENT PLAN

A timber management plan for the commercial forestland was prepared for the resource area in 1981. This plan provides information on the forest resources. The timber sale program EA was approved in 1983. It provides information on site-specific management activities within the resource area.

SILVICULTURAL PRACTICES

Silvicultural practices are the site-specific, on-the-ground activities used to cultivate the growing of trees. The major silvicultural practices used in the resource area are described in the following section.

Regeneration

Regeneration is the process of reforestation of a site. There are two types of regeneration. The natural method is when the site is reforested from seeds left on the site

and seeds deposited from the remaining trees. Ponderosa pine in the Black Hills lends itself easily to this method when there is a good seedbed, good seed crop, and cooperating weather. This is the preferred and most extensive method used for reforestation of ponderosa pine in the Black Hills. The artificial method is when seeds or tree seedlings are planted by humans. This method of regeneration may be used when a fire has destroyed all seed sources on the site.

Stand Development and Silvicultural Treatments

Stand development refers to the life of a stand from establishment until harvest or the death of the stand. Depending on the management objective for that stand the silvicultural treatments that occur during the life of the stand may improve the stands growth potential, help reduce a fire hazard, improve forage production, and reduce insect or disease outbreaks. These objectives may be accomplished with a single or series of treatments which may include precommercial thinning, commercial thinning, and some form of a shelterwood cut. Precommercial thinning (PCT) occurs in a young stand that is overstocked with unmerchantable sawtimber. This cut removes unpressed and damaged trees giving the remaining healthier trees a better chance to survive. Spacing guidelines used for ponderosa pine in the Black Hills are as follows:

- one-inch trees are spaced at 600 per acre;
- two- to three-inch trees are spaced at 400 per acre; and,
- five-inch trees are spaced at 300 per acre.

Precommercial thinning is a treatment method that the BLM contracts out.

Commercial thinning is a treatment where a commercial sawtimber size has been reached in the stand. This treatment removes slower growing, low, and damaged trees from the stand leaving the final crop trees. The next treatment that occurs is the first cut in a series of harvest or shelterwood cuts. The first shelterwood or preparatory cut (individual cut tree selection) removes 30% to 40% of basal area. Trees harvested are the mature older and low vigor trees retaining the best crown and high vigor trees which show past evidence of good cone production. These trees provide the seed and shelter for the next generation of trees on the site. The final harvest will remove the remaining original stand. This cut cannot be made until the new stand of reproduction has been established, normally 20 years later.

APPENDIX G

The process in stand development from seed germination to harvest takes about 120 years.

A sanitation or salvage harvest is an unplanned harvest to remove dead or dying trees. This harvest usually occurs after some form of natural event such as fire, insect and disease outbreak, or blowdown from winds.

SLASH DISPOSAL

Slash is the part of the tree which cannot be used for lumber products. Slash includes tops, limbs, and other unusable portions of the trees left in the area after harvesting. Products such as fuelwood, post and poles, and other wood products may be salvaged from logging slash. The remaining or unusable slash is treated in several methods.

Lop and Scatter

Lop and scatter is where the top and large branches of the trees are cut to be within a predetermined height from the ground. This method helps to reduce a fire hazard, speeds up the decomposition of the slash, and reduces effects on the visual resources.

Pile and Burn

As a whole tree mechanical harvester becomes more widely used, more piles are being created at the landing

sites. With this method of slash treatment the whole tree is yarded to a central location where it is delimbed, and the log is cut into lengths. The slash is piled and burned at a later time.

ALLOWABLE HARVEST

The resource area's allowable harvest level was calculated from data collected in an extensive forest inventory completed in 1973 and intensive forest inventory completed in 1979. This inventory data was evaluated, and the allowable harvest level was calculated. The yield for the 17,147 acres available for management was calculated to be 673 thousand board feet annually. A decision record and finding of no significant impact for the timber sale EA (USDI, BLM 1983a) set the harvest at 500 mbf annually.

Data from stand-based forest inventory for the Casper District including Buffalo, Platte, and Newcastle resource areas was entered in 1987 into the U.S. Forest Service's FORRLAN planning model. Three alternative harvest schedules or solutions were calculated using a variety of management constraints. All three alternatives were modeled over a 200-year planning horizon. For each alternative a long-term sustained yield capacity for the district was calculated and a decadal harvest for each resource area was calculated.

APPENDIX H

A DETAILED DISCUSSION OF OIL AND GAS ACTIVITIES AND PROCESSES IN THE NEWCASTLE RESOURCE AREA

INTRODUCTION

This appendix contains a detailed discussion of the activity caused by the presence, or anticipated presence, of oil and gas resources. Leasing, seismic exploration, drilling operations, and production operations are each discussed separately. Oil and gas activity is almost entirely the result of demands from the oil and gas industry. Those demands are based on commodity prices, advances in technology, and interest in oil and gas plays.

LEASING

The Mineral Leasing Act of 1920 (as amended) provides that all public lands be open to oil and gas leasing unless a decision of the authorized officer has been issued to close the area. Through the BLM's land use planning system the availability of public land for leasing is analyzed, and conflicts between oil and gas development and other resources are identified and hopefully resolved.

Process

Leases on federal oil and gas are offered by the Wyoming state BLM office (WSO) in Cheyenne. Acreage may be nominated for lease by interested parties. Acreage is offered first in a competitive lease sale then noncompetitively over the counter.

Acreage to be offered for lease is proportioned into groups called parcels. Legal descriptions of these parcels are sent to the NRA office and other surface management agencies for review and application of lease stipulations that will mitigate the effect of oil and gas operations on other resources. Stipulations on split estate acreage are applied by the NRA staff. The lease stipulations used, BLM guidance, and how the stipulations are applied in the NRA are given in appendix E. Map H-1 shows the areas currently open to development under standard terms and conditions, areas currently open with minor constraints, areas currently open with major constraints, and areas closed to leasing.

After the lease stipulations are applied the parcel descriptions are returned to the WSO. Oil and gas leases covering the area listed in the parcel descriptions are offered for sale competitively via oral bid. The minimum bid is \$2.00 per acre. Oil and gas leasing is a discretionary act by the Secretary of the Interior. A minimum bid does not compel the BLM to lease any of

the acreage offered if there is sufficient justification not to issue a lease. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 requires that a competitive sale be held four times a year. Since June 1988 competitive sales have been held bimonthly in Wyoming (except for April 1996 which was canceled because of the partial federal government shutdown). Leases issued via the competitive sale have a ten-year term and one-eighth royalty. Yearly rentals are \$1.50 per acre for the first five years and \$2.00 per acre thereafter.

Acreage in lease offers that do not receive a minimum bid is available noncompetitively for two years starting the day after the competitive sale. A substantial amount of acreage that did not get a minimum bid is leased noncompetitively over the counter the day after the sale. Applications for noncompetitive oil and gas leases are processed in the WSO. If two or more applications are received the same day for the same acreage a drawing is held. Leases offered noncompetitively have a 10-year term and one-eighth royalty. Yearly rentals for noncompetitive leases are the same as for competitive leases.

Past and Current Activity

There are 2.12 million acres of federal oil and gas ownership in the NRA. This acreage is 46% of the total resource area and is interspersed with nonfederal oil and gas ownership. In the NRA there are .29 million acres of BLM-administered surface; other federal agencies administer .42 million surface acres (figure H-1). In March 1994, there were 1,743 oil and gas leases covering 0.69 million acres in effect in the NRA. Of the leases in effect, 658 were productive (0.19 million acres) and 1,085 were not productive (0.50 million acres). Table H-1 shows these figures for 1989, 1990, and 1997. Note there is an overall decrease in leases and acreage but the decrease in held-by-production (HBP) leases and acreage is relatively less than for nonHBP acreage.

The acreage offered between the February 1989 and February 1997 lease sales varied considerably (figure H-2). The amount of acreage sold in these lease sales also varied, but in most cases it was considerably less than 50% of what was offered (figures H-2 and H-3). The average successful bids in these sales varied from about \$2 to \$25 per acre. Average successful bids generally declined until 1995 but have increased since then (figure H-4). Likewise the total bonus dollars bid varied from about \$2,000 to \$285,000. Total bonuses trended downward but appear to trend upward since 1995 (figure H-5). From February 1989 through Febru-

APPENDIX H

TABLE H-1
FEDERAL LEASES AND ACREAGE IN THE NRA FOR SPECIFIC YEARS

Date	HBP Leases	HBP Acreage	NonHBP Leases	NonHBP Acreage	Total Leases	Total Acreage
November 1989	707	219,379	2,863	1,253,001	3,570	1,472,380
November 1990	702	212,609	2,876	1,306,543	3,578	1,519,152
March 1997	658	188,280	1,085	497,537	1,743	685,817

ary 1997, the average sale offered 29,000 acres in the NRA, of which 8,000 acres were sold, for a total bonus of \$74,000. About half of the bonus money received by the BLM is returned to the state of Wyoming.

SEISMIC EXPLORATION

Seismic exploration is a process where energy is transmitted into the subsurface usually by explosives or low frequency vibrations. The reflected energy waves are recorded and electronically processed. This process usually involves the operation of small- and medium-sized trucks on the surface and drilling shallow (to about 200 feet) shot holes. After the seismic data are collected and further processed, a cross-section of the earth's geologic layers is produced. Seismic reflection surveys help locate and determine the extent of oil and gas reservoirs.

Process

Before a seismic survey is conducted on BLM-administered surface a notice of intent (NOI) which gives the location and type of activity, and the results of an on-the-ground cultural inventory, is filed in the NRA office. The BLM does an in-office study to determine if any threatened or endangered species are affected. The BLM notifies the seismic operator when all the criteria of the NOI are met.

If a seismic survey is conducted on behalf of an oil and gas operator or lessee on lease, a lease bond of at least \$10,000, a statewide bond of at least \$25,000, or a nationwide bond of at least \$150,000 is required. The area manager may and does increase the bond amount if the minimum amount is inadequate. The BLM also determines if the seismic survey will adhere to lease stipulations and may specify how shot holes are to be plugged.

If a seismic contractor is not conducting a survey on behalf of a lessee or operator and desires to cross BLM-administered surface, a \$5,000 bond per NOI, a \$25,000

statewide bond, or a \$50,000 nationwide bond is required. If bond amounts are inadequate they may be increased by the area manager.

If a seismic contractor is not conducting a survey on behalf of a lessee or operator over split estate land (federal oil and gas) it is not necessary to notify the BLM.

After the seismic survey is complete a notice of completion is required. The BLM then has 30 days to inspect the survey site and determine if shot holes are adequately plugged. If reclamation of the survey site is adequate the BLM approves the notice of completion.

On November 15, 1990 the NOI process was replaced by the Application to Conduct Oil and Gas Geophysical Exploration. As with the NOI process it is the BLM's objective to promote the development and utilization of oil and gas resources while assuring adequate protection of other resource values. The district manager holds and administers the individual geophysical bonds posted within the district. The area manager is responsible for processing each application and ensuring that public resource values are protected.

A programmatic agreement (PA) for managing cultural resources in response to geophysical actions has been signed by the BLM, the State Historic Preservation Office, and the Advisory Council on Historic Preservation. The PA provides for approval of NOIs before State Historic Preservation Office (SHPO) comments are received if cultural resources can be avoided. This is a major timesaving measure which represents a departure from normal regulatory procedure. Additionally, the BLM will not be responsible for cultural resources on private land unless a BLM-authorized geophysical project may result in an effect on private surface immediately adjacent to federal surface or between tracts of federal surface.

Past and Current Activity

From 1987 through 1996 there were 47 NOIs in the NRA. Most seismic exploration was in extreme western

Surface and Mineral Ownership in the NRA

4.57 million acres total

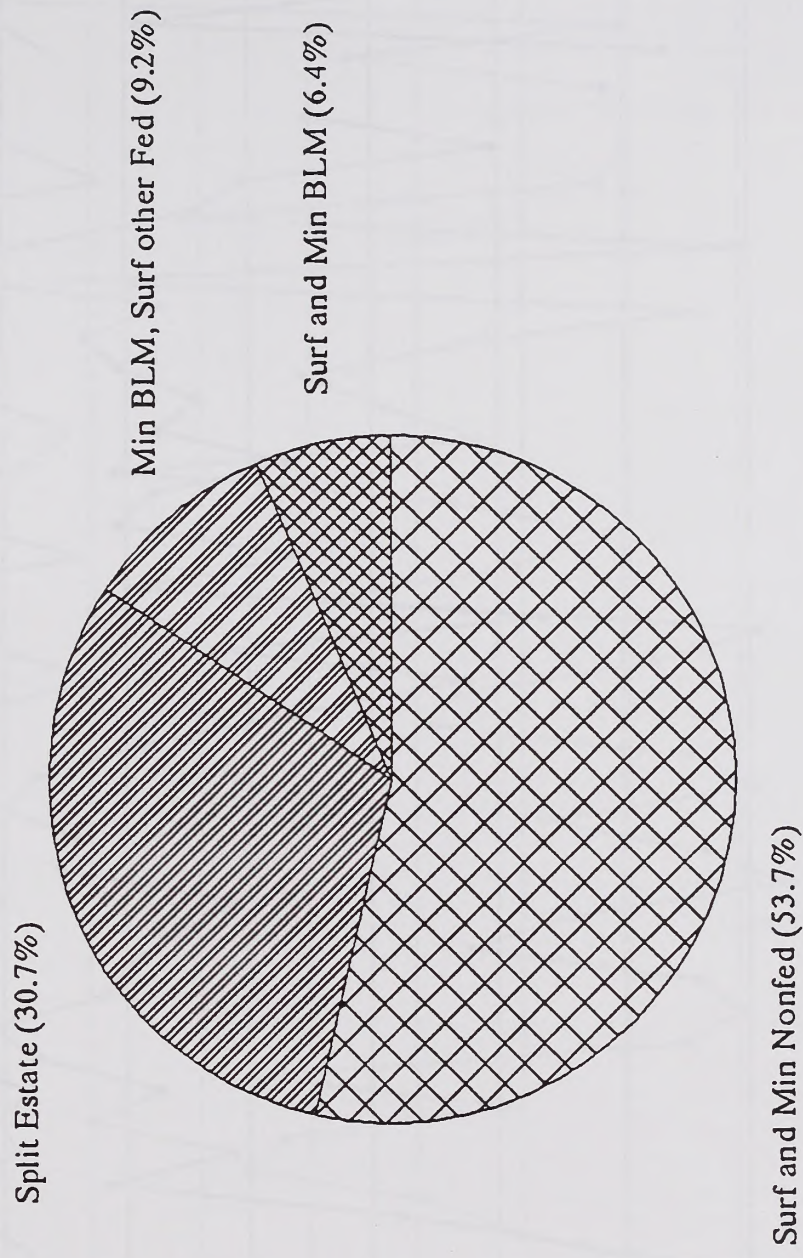
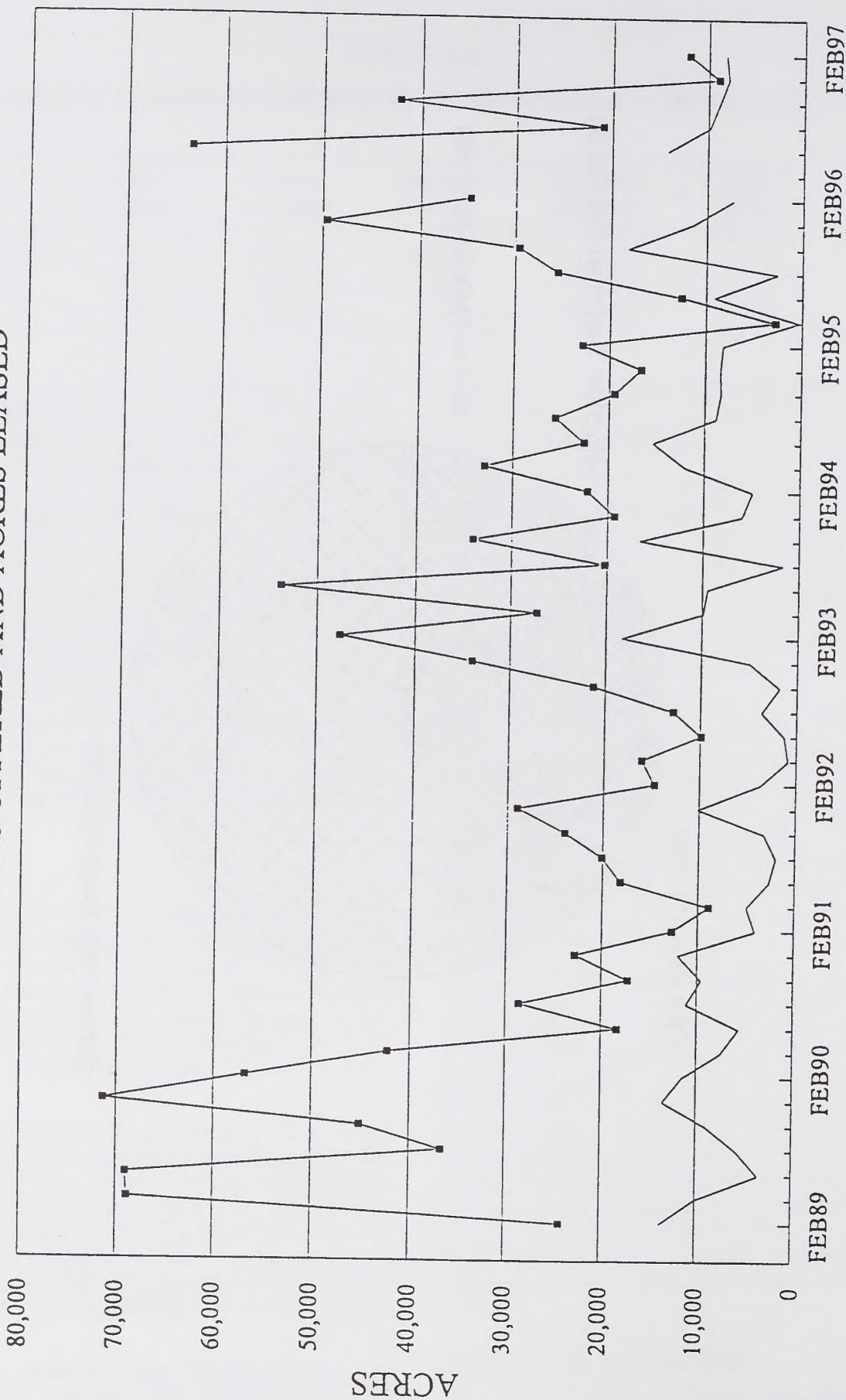


FIGURE H-1

FEDERAL OIL AND GAS LEASE SALE RESULTS ACRES OFFERED AND ACRES LEASED

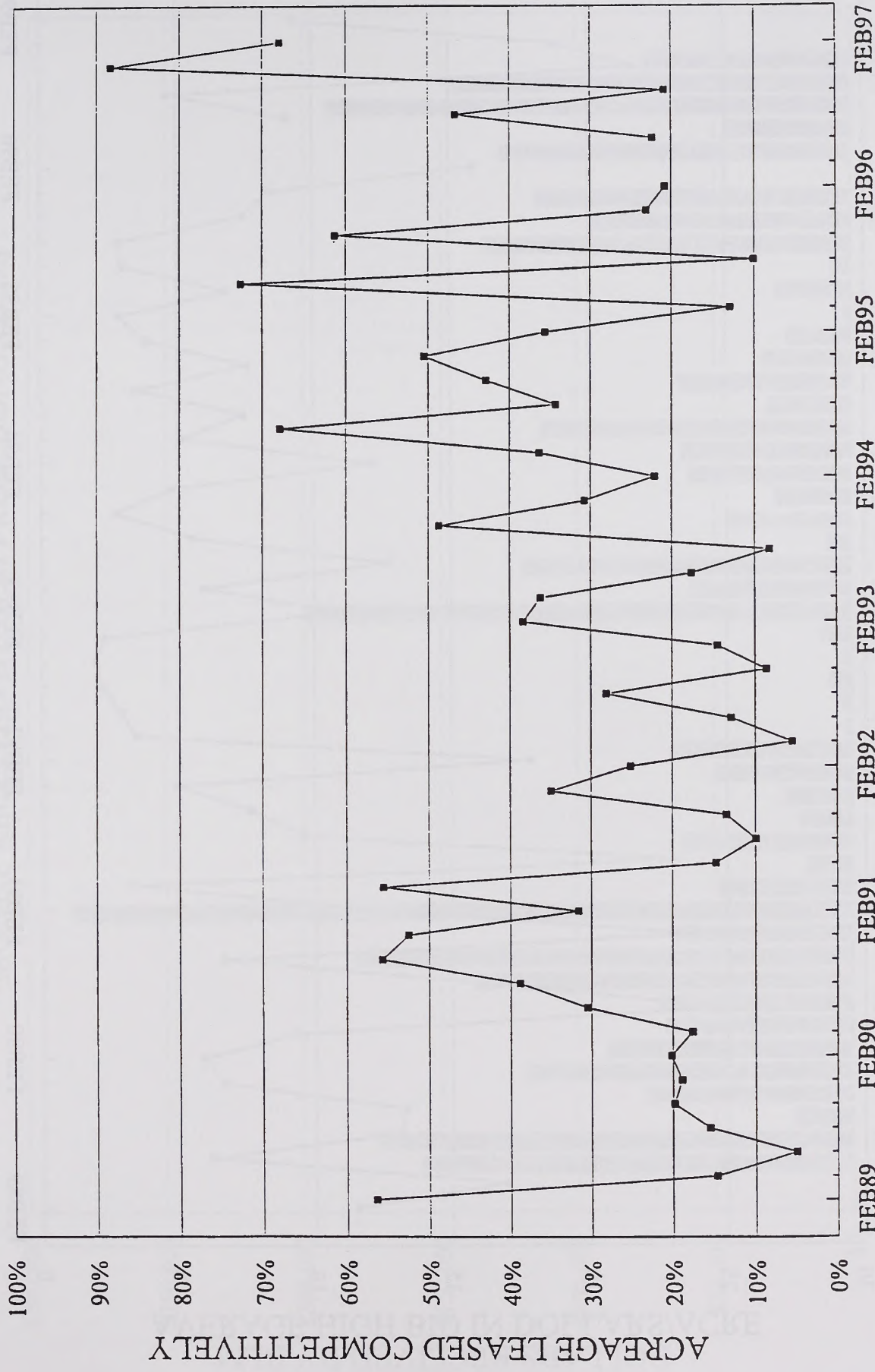


—■— Offered
 — Leased Competitively

The April 96 federal oil and gas lease sale was canceled due to a partial federal government shut-down.

FIGURE H-2

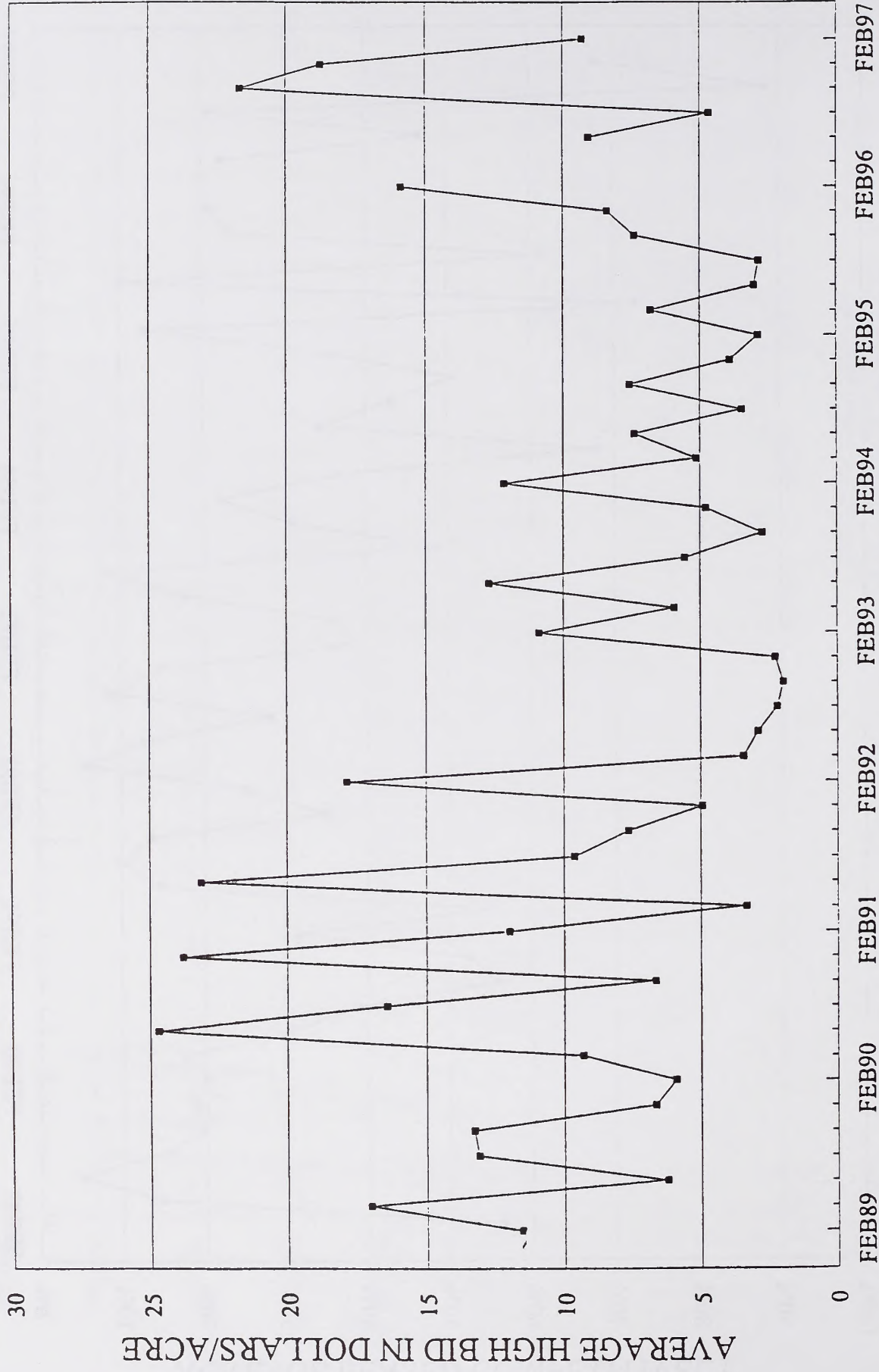
FEDERAL OIL AND GAS LEASE SALE RESULTS PERCENT OF ACREAGE LEASED COMPETITIVELY



The April 96 federal oil and gas lease sale was canceled due to a partial federal government shut-down.

FIGURE H-3

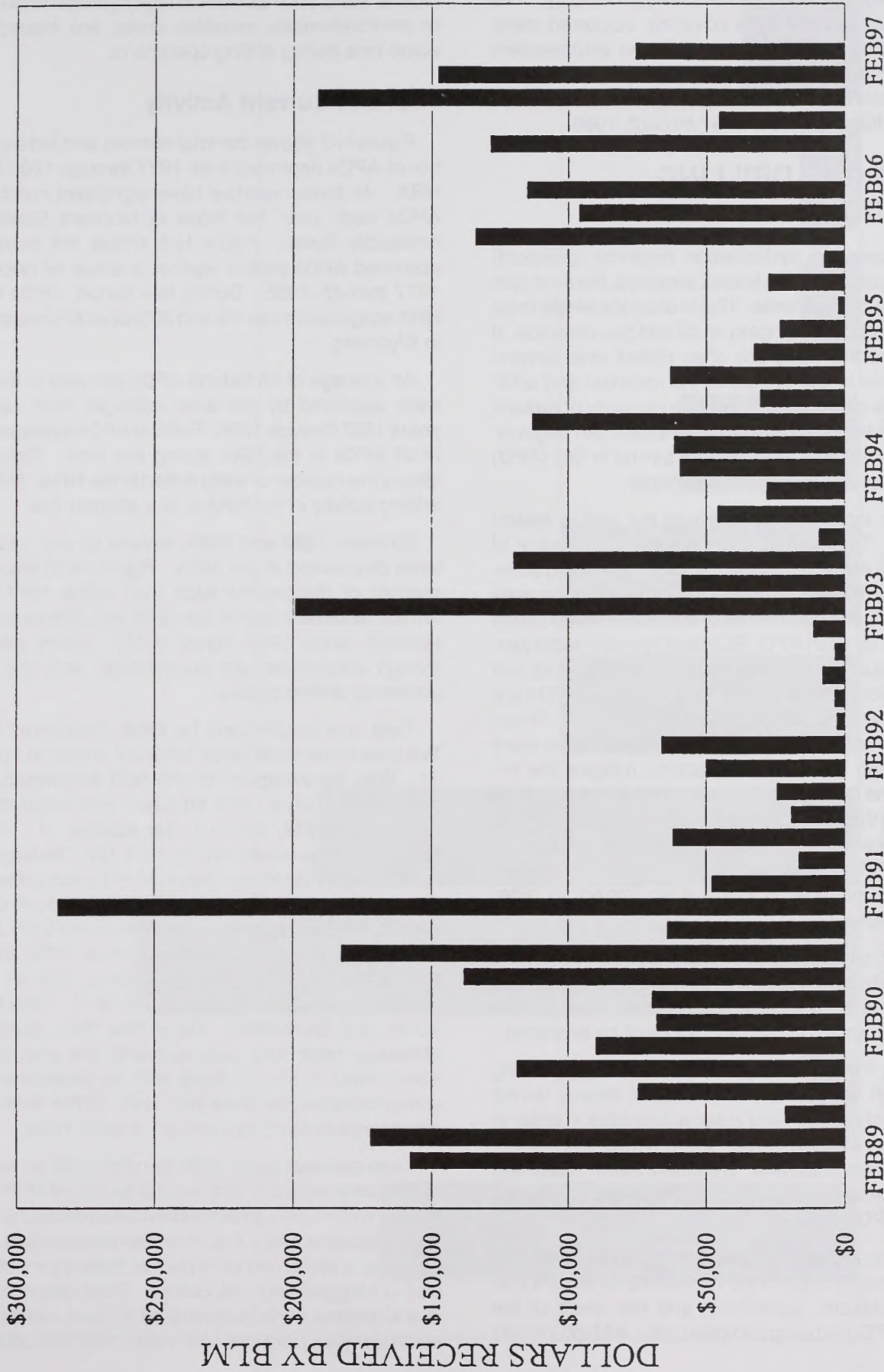
FEDERAL OIL AND GAS LEASE SALE RESULTS AVERAGE HIGH BID FOR ACREAGE LEASED COMPETITIVELY



The April 96 federal oil and gas lease sale was canceled due to a partial federal government shut-down.

FIGURE H-4

FEDERAL OIL AND GAS LEASE SALE RESULTS MONEY RECEIVED BY BLM FROM BONUS BIDS



The April 96 federal oil and gas lease sale was canceled due to a partial federal government shutdown.

FIGURE H-5

Crook County and northwestern Weston County. The BLM received several NOIs covering scattered townships in northern Niobrara and extreme southeastern Weston counties. Almost all seismic surveys in the past five years have been 3-D surveys. Figure H-6 shows the number of NOIs filed from 1987 through 1996.

OIL AND GAS DRILLING OPERATIONS

Once a potential hydrocarbon reservoir (prospect) has been located and the leases acquired, the next step is drilling one or more wells. This is often the single most expensive step in developing an oil and gas reservoir. If oil is discovered, wells are often drilled over several years as more is learned about the reservoir and additional wells are needed to maximize recovery or replace unusable wells. Before drilling operations can begin on federal minerals an application for permit to drill (APD) must be approved by the area manager.

Once the location is determined the well is staked (surveyed). The BLM is notified either by a notice of staking or an APD. Before any surface-disturbing activity can occur the APD must be approved by the area manager. A site-specific environmental assessment (EA) is done for each APD. BLM and operator representatives conduct an onsite inspection of the proposed drilling location before an APD is approved. APDs are subject to site-specific conditions of approval. These site-specific conditions of approval, which may be more restrictive than the lease stipulations, mitigate the impact of oil and gas operations on other resource values even though these values were not known at the time the lease was issued. In specific instances as part of the approved APD some lease stipulations may be modified by the area manager if there is no impact to other resource values.

If oil and gas operations are expected to have a significant adverse impact on other resource values and these impacts cannot be mitigated by the site specific conditions of approval then an EIS must be prepared.

The area manager may restrict oil and gas drilling operations in specific parts of federal leases during some times of the year and in some locations in order to protect other resource values such as crucial deer winter range or stream channels. Generally these areas and times are identified in the lease stipulations or on the approved APD.

While federal wells are being drilled BLM personnel are authorized to inspect the operations to ensure that federal regulations, guidelines, and the terms of the approved APD are being complied with. All high-priority

federal wells, such as wells in high hydrogen sulfide gas or environmentally sensitive areas, are inspected at some time during drilling operations.

Past and Current Activity

Figure H-7 shows the total number and federal number of APDs approved from 1977 through 1996 for the NRA. All three counties have significant numbers of APDs each year, but those in Niobrara County are noticeably fewer. Figure H-8 shows the number of approved APDs plotted against average oil price from 1977 through 1995. During this period, APDs for the NRA ranged between 4% and 29% of all APDs approved in Wyoming.

An average of 48 federal APDs per year in the NRA were approved by the area manager from calendar years 1987 through 1996. Federal APDs averaged 57% of all APDs in the NRA during this time. Figure H-9 shows the number of wells drilled in the NRA. Note that drilling activity in the NRA is at a 50-year low.

Between 1980 and 1989, several oil and gas fields were discovered in the NRA. Figure H-10 shows the number of discoveries each year since 1977. The annual discovery rate in the NRA has decreased substantially since 1989 (figure H-10). Some wells, although discoveries, are uneconomic, and little or no additional drilling occurs.

Field size distributions for fields discovered during five-year increments since 1945 are shown in figure H-11. With the exception of one field discovered in the 1965-1969 interval, field size has decreased steadily since 1955-1959, although the number of new field discoveries has increased (figure H-12). The large peak in the 1965-1969 interval (figure H-11) is due to the Finn-Shurley Field in Weston County which, although discovered in 1965, was developed mostly in the early 1980s. The largest new field discoveries since 1970, an average of the three largest, five largest, and all newly discovered fields is shown in figure H-11. Note that all trends are downward. Many new field discoveries ultimately have only one well and are uneconomic. Abandoned or shut-in fields with no productive wells were considered to have one well. Other fields were considered to have the number of wells listed.

From calendar years 1987 through 1996 an average of 36 federal wells per year were drilled in the NRA. Each federal well causes an estimated disturbance of 0.5 acre for the location and 0.6 acre for the access road. All of this area is reclaimed within two to three years after the well is plugged and abandoned. Total disturbed area due to federal wells is estimated to have averaged 39 acres per year from calendar years 1987 through 1996.

SEISMIC ACTIVITY ON BLM ADMIN. SURFACE
NOTICES OF INTENT TO CONDUCT SEISMIC OPERATIONS

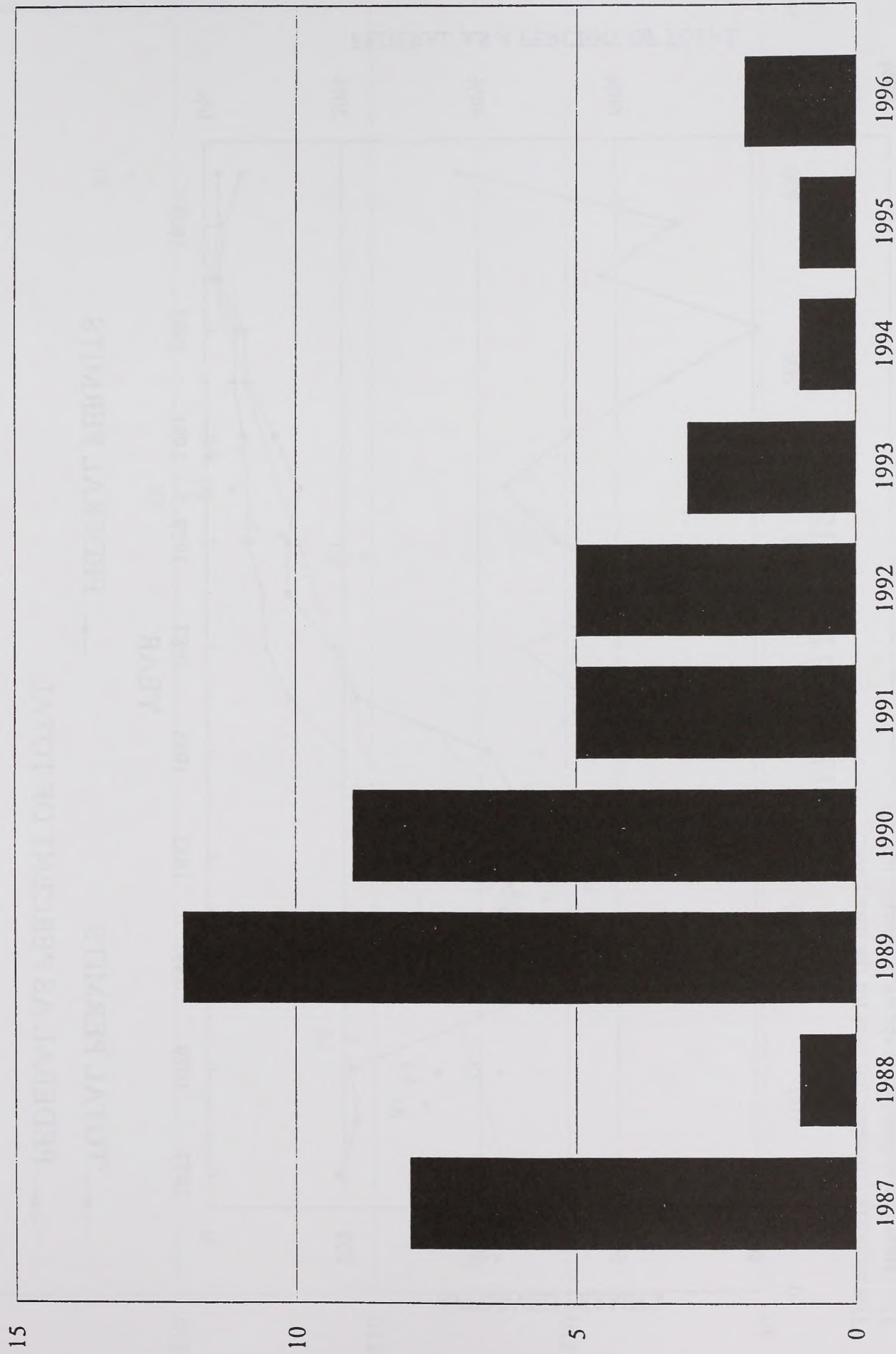


FIGURE H-6

APPROVED DRILLING PERMITS

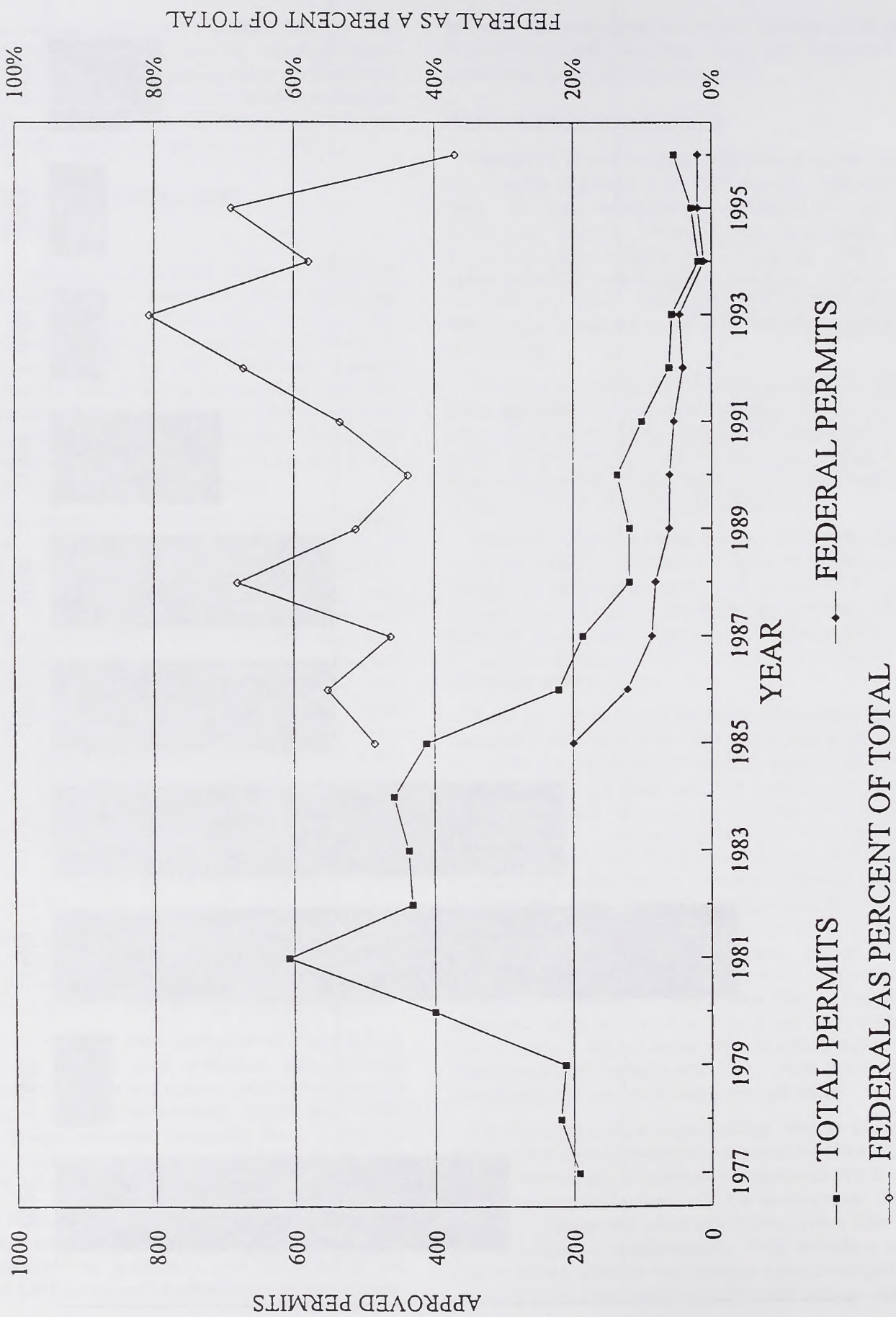
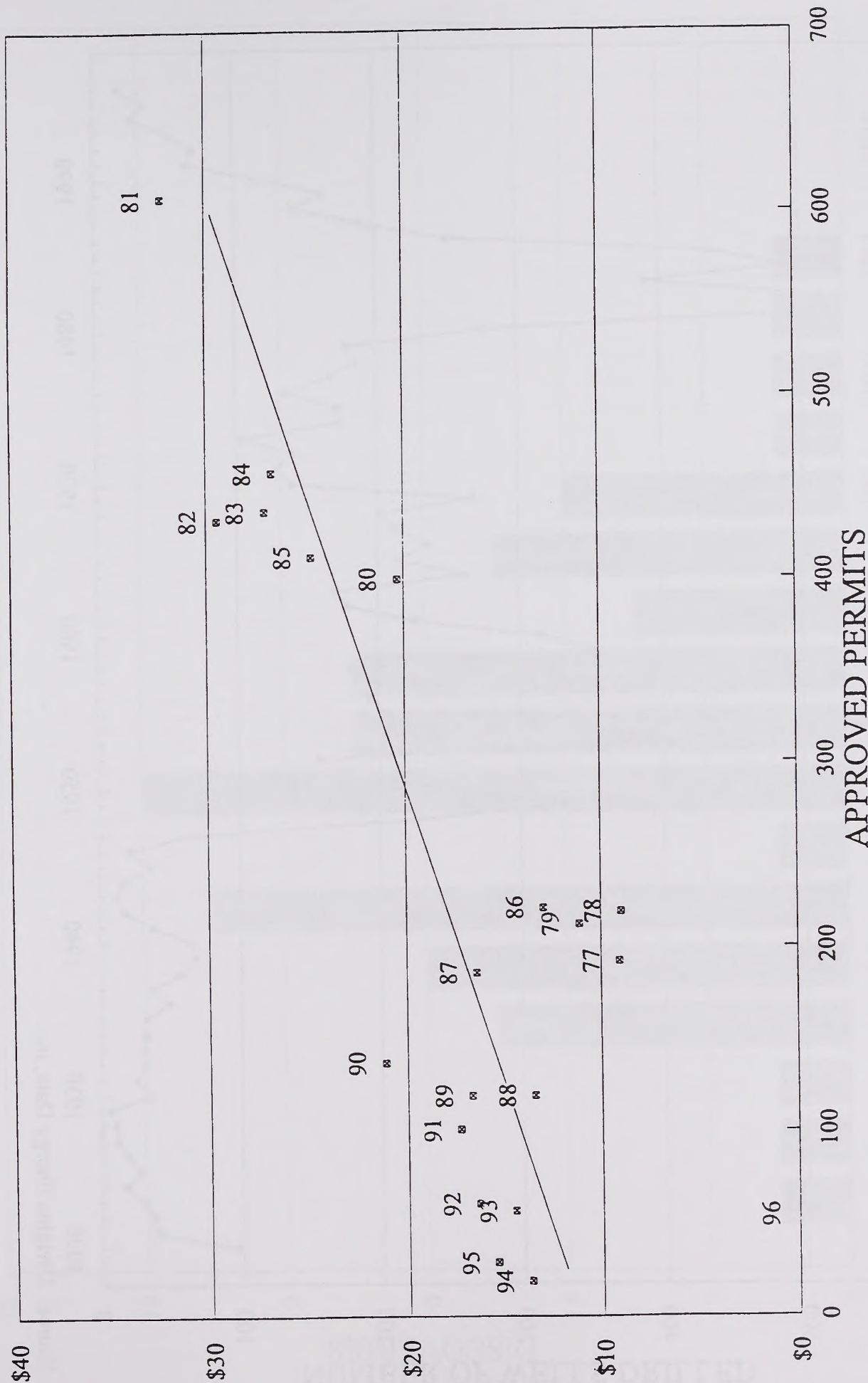


FIGURE H-7

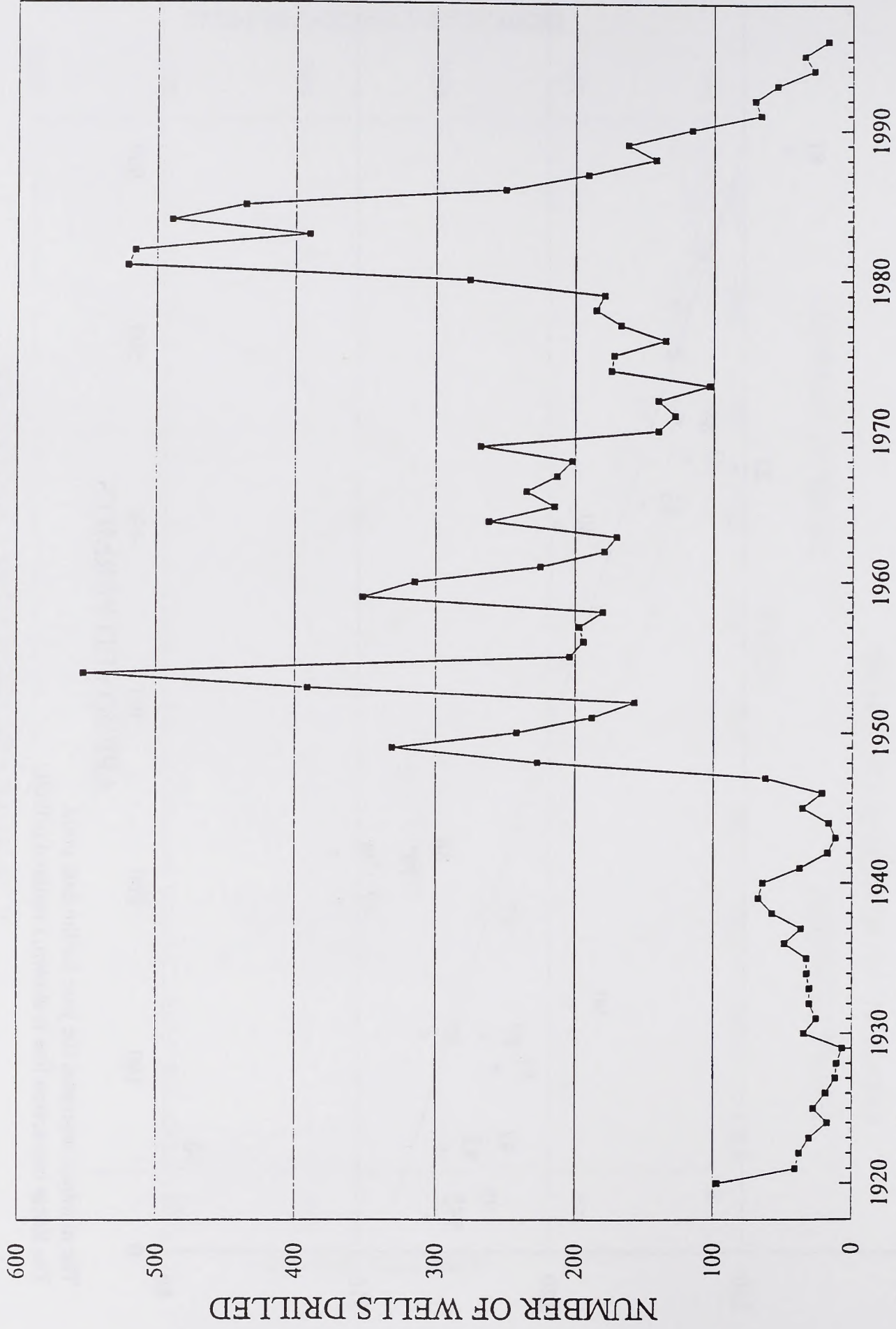
APPROVED APPLICATIONS AND OIL PRICE



The numbers represent the year for the data point.
 The linear regression line is shown, r squared is 0.60.

FIGURE H-8

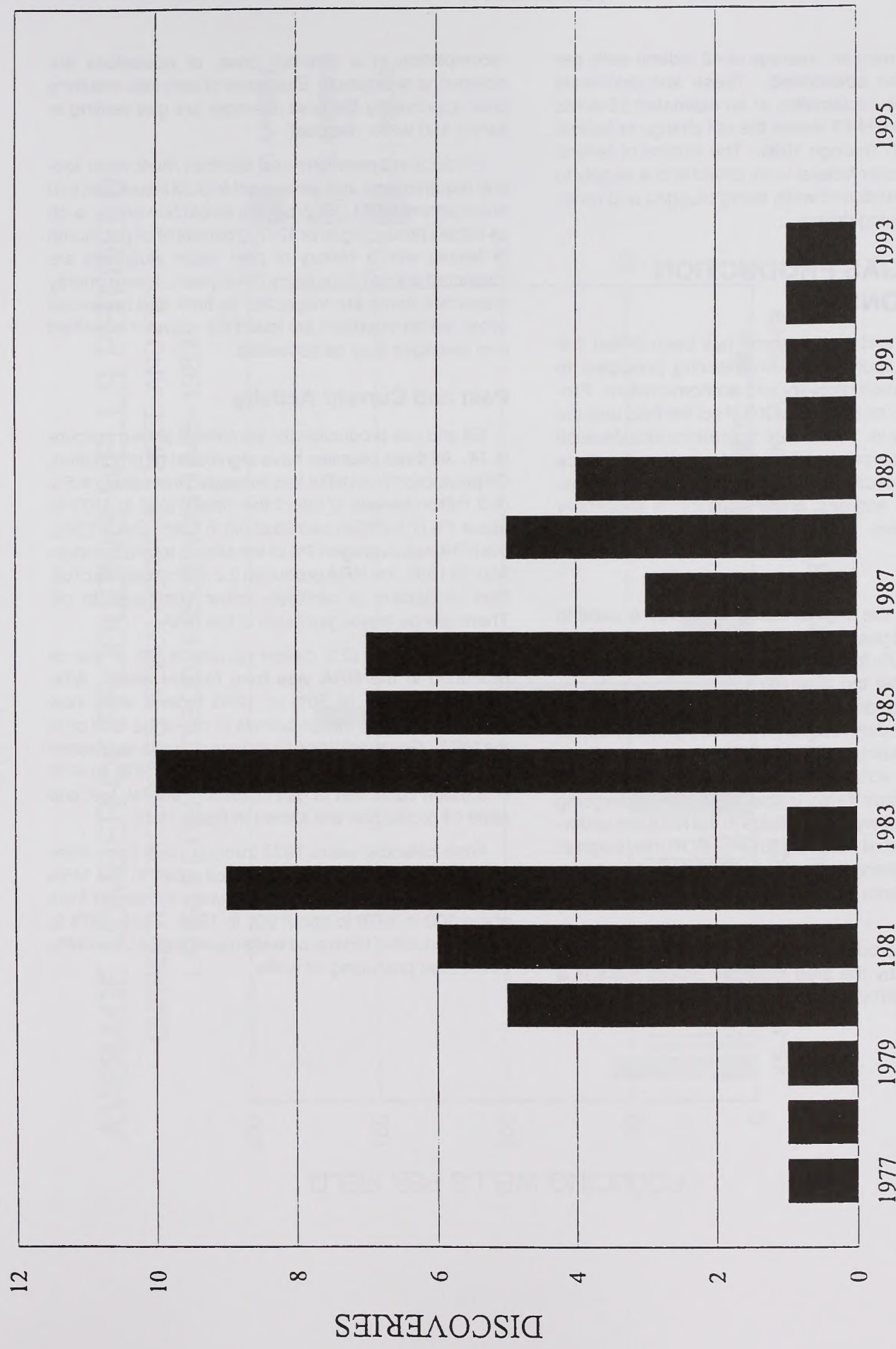
WELLS DRILLED IN THE NRA



Source: Dwigths Energy Data, Inc.

FIGURE H-9

NEW OIL AND GAS FIELDS DISCOVERED



Data are from the Wyoming Oil and Gas Conservation Commission.

FIGURE H-10

During these years an average of 48 federal wells per year have been abandoned. These abandonments have resulted in reclamation of an estimated 52 acres per year. Figure H-13 shows the net change in federal wells from 1987 through 1996. The excess of federal wells plugged over federal wells drilled is due largely to temporarily abandoned wells being plugged and fewer federal wells being drilled.

OIL AND GAS PRODUCTION OPERATIONS

After an oil and gas reservoir has been drilled it is necessary to apply sound engineering principles to maximize reservoir recovery and economic return. Production operations occur over the life of the field until the last well is shut-in. Production operations include such things as maintenance and repair of pumps and surface equipment, measurement of produced oil and gas, transportation of oil and gas, and installation of secondary recovery facilities.

Process

Initially only the original reservoir energy is used to produce oil and gas. This is called primary recovery and allows about 10% to 25% of the original oil in place to be recovered. After the reservoir's energy begins to deplete due to withdrawals, secondary recovery may be initiated. Secondary recovery involves injecting water to increase or maintain reservoir pressure and allows about 25% to 40% of the original oil in place to be recovered. Many fields in the NRA are undergoing secondary recovery. Some fields in the NRA are undergoing enhanced oil recovery (EOR). EOR may begin at any stage of reservoir development and involves injection of surfactants or other chemicals to increase oil recovery.

Oil and gas production operations are not subject to prior approval by the area manager unless there is a possible loss of royalty, additional surface disturbance,

recompletion in a different zone, or operations are nonroutine or unusual. Examples of activities requiring prior approval by the area manager are gas venting or flaring and water disposal.

Production operations and facilities must meet federal requirements and are subject to BLM inspection and enforcement (I&E). High priority inspection items, such as leases producing over 12,000 barrels of oil per month or leases with a history of past major violations are inspected at least once every three years. Lower priority inspection items are inspected as time and resources allow. When violations are found the operator is notified and damages may be assessed.

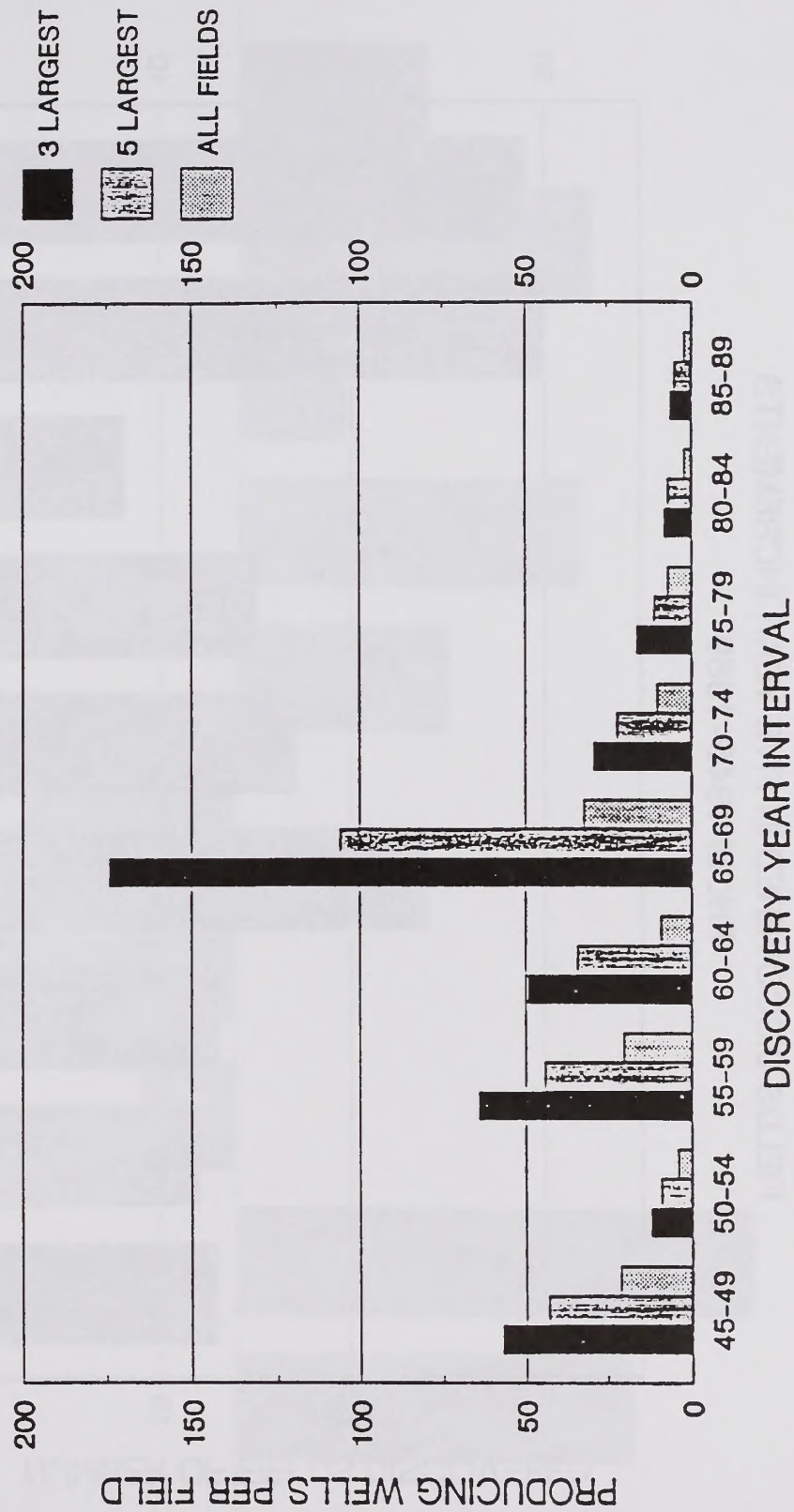
Past and Current Activity

Oil and gas production for the NRA is shown in figure H-14. All three counties have significant oil production. Oil production from NRA has increased from about 4.5% (6.2 million barrels of oil) of the state's total in 1977 to about 7% (7.6 million barrels of oil) in 1985. Since 1985, the NRA has averaged 7% of the state's total oil production. In 1995, the NRA produced 2.2 million barrels of oil. Gas production is relatively minor compared to oil. There are no major gas fields in the NRA.

In 1978, 38% (2.3 million barrels of oil) of the oil produced in the NRA was from federal wells. After reaching a peak of 50% in 1990 federal wells now produce 47% (2.4 million barrels of oil) of the total oil in the NRA. Gas production from federal wells decreased from 78% (2.4 billion cubic feet of gas) in 1978 to 47% (1.8 billion cubic feet of gas) in 1995. Federal, fee, and state oil production are shown in figure H-15.

From calendar years 1978 through 1995 there were an average of 1,827 productive oil wells in the NRA (figure H-16). Productive federal wells increased from about 500 in 1978 to about 900 in 1984. From 1978 to 1995 productive federal oil wells have been 41% to 44% of the total producing oil wells.

AVERAGE NUMBER OF PRODUCING WELLS PER FIELD **CURRENTLY PRODUCING WELLS FOR THE THREE AND FIVE** **LARGEST FIELDS DISCOVERED FROM 1945-1989**



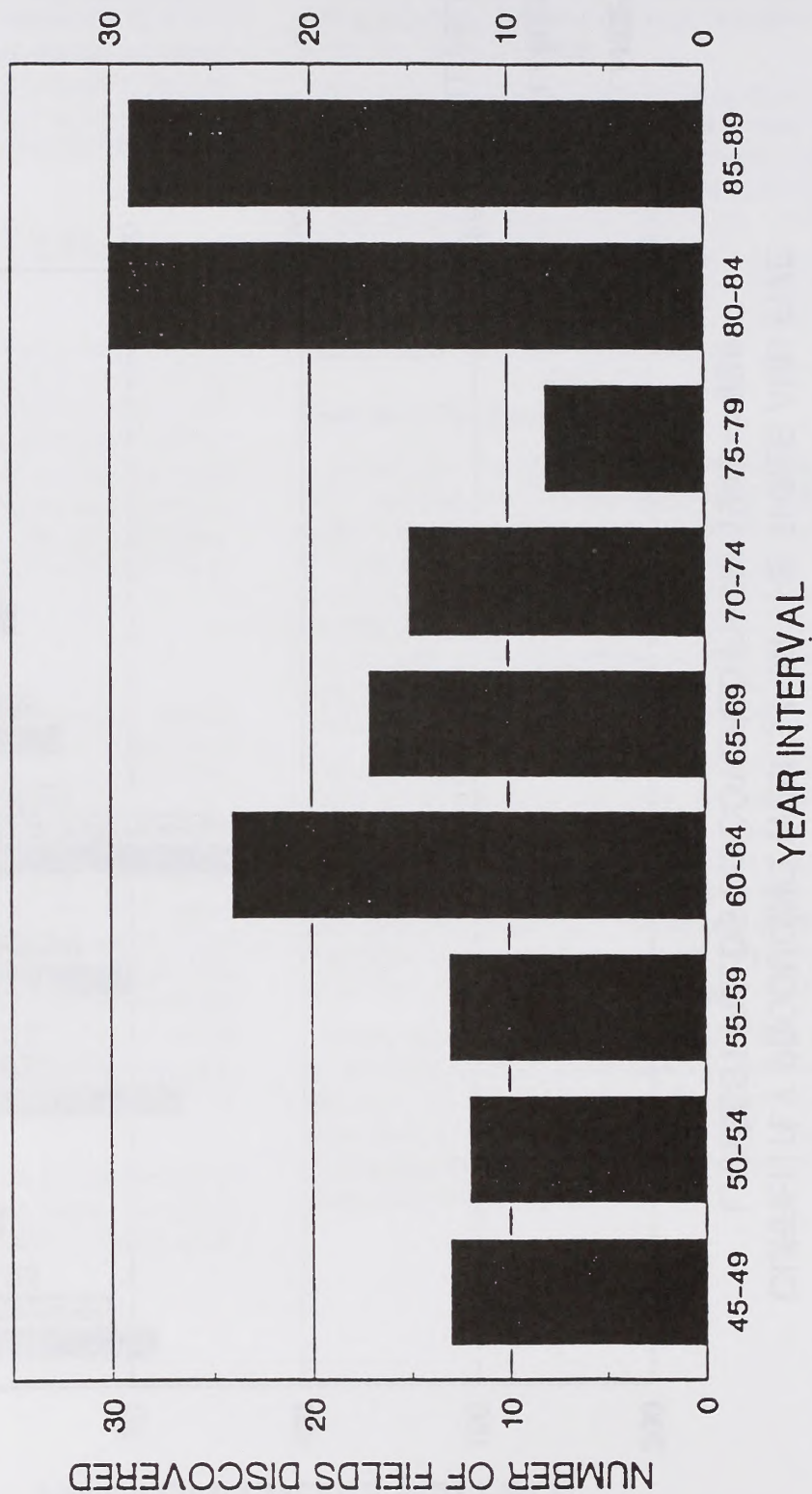
SOURCE: Data are from the Wyoming Oil and Gas Conservation Commission.

FIGURE H-11

NEW OIL AND GAS FIELD DISCOVERIES

FIELDS DISCOVERED IN FIVE YEAR INCREMENTS

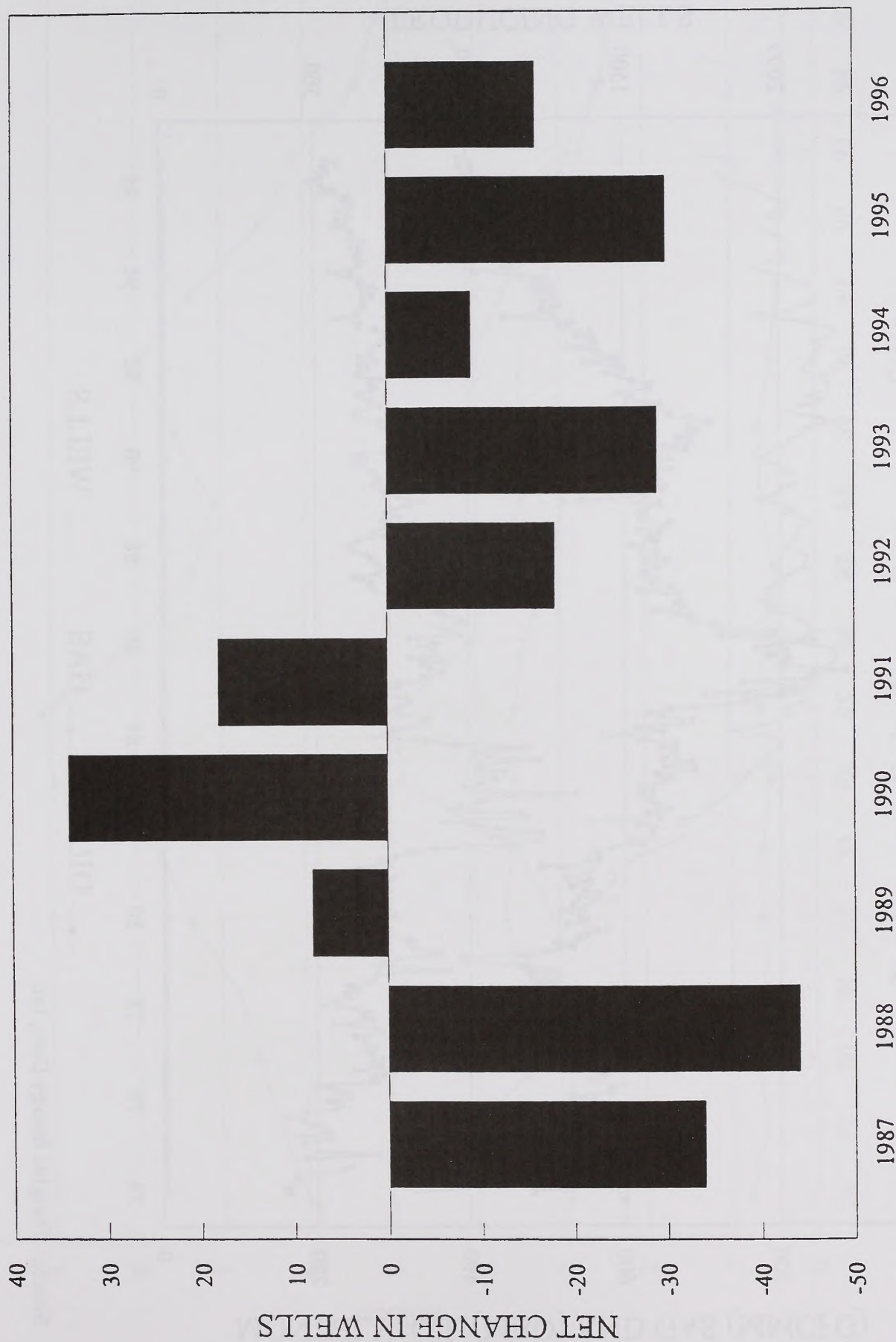
FROM 1945-1989



SOURCE: Data are from the Wyoming Oil and Gas Conservation Commission 1990 statistics book.

FIGURE H-12

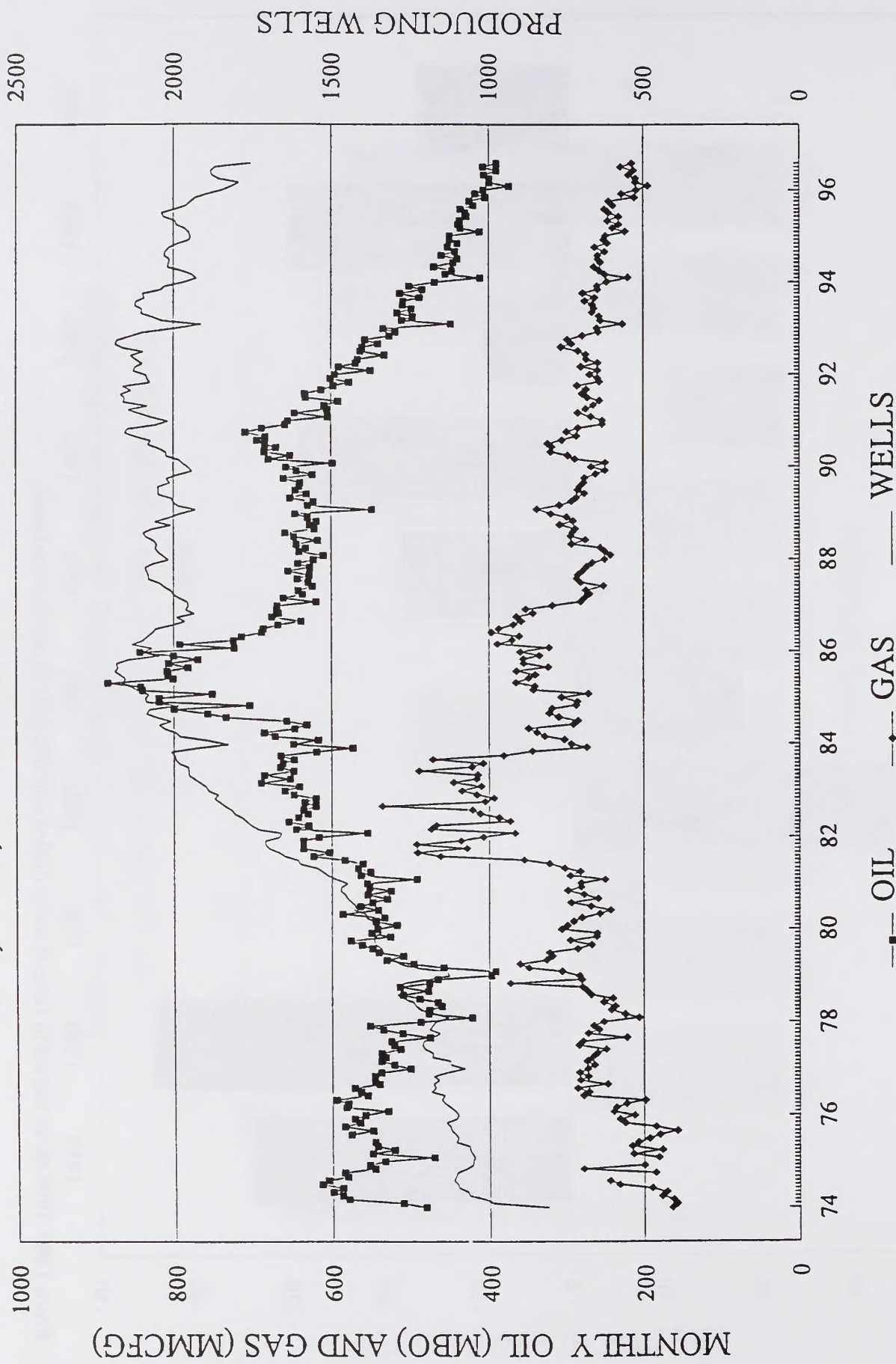
NET CHANGE IN FEDERAL WELLS



From 1987-1996 there were 356 federal wells drilled and 476 federal wells abandoned.

FIGURE H-13

OIL, GAS, AND PRODUCING WELLS



Source: Dight's Energy Data, Inc.

FIGURE H-14

OIL PRODUCTION BY MINERAL OWNERSHIP

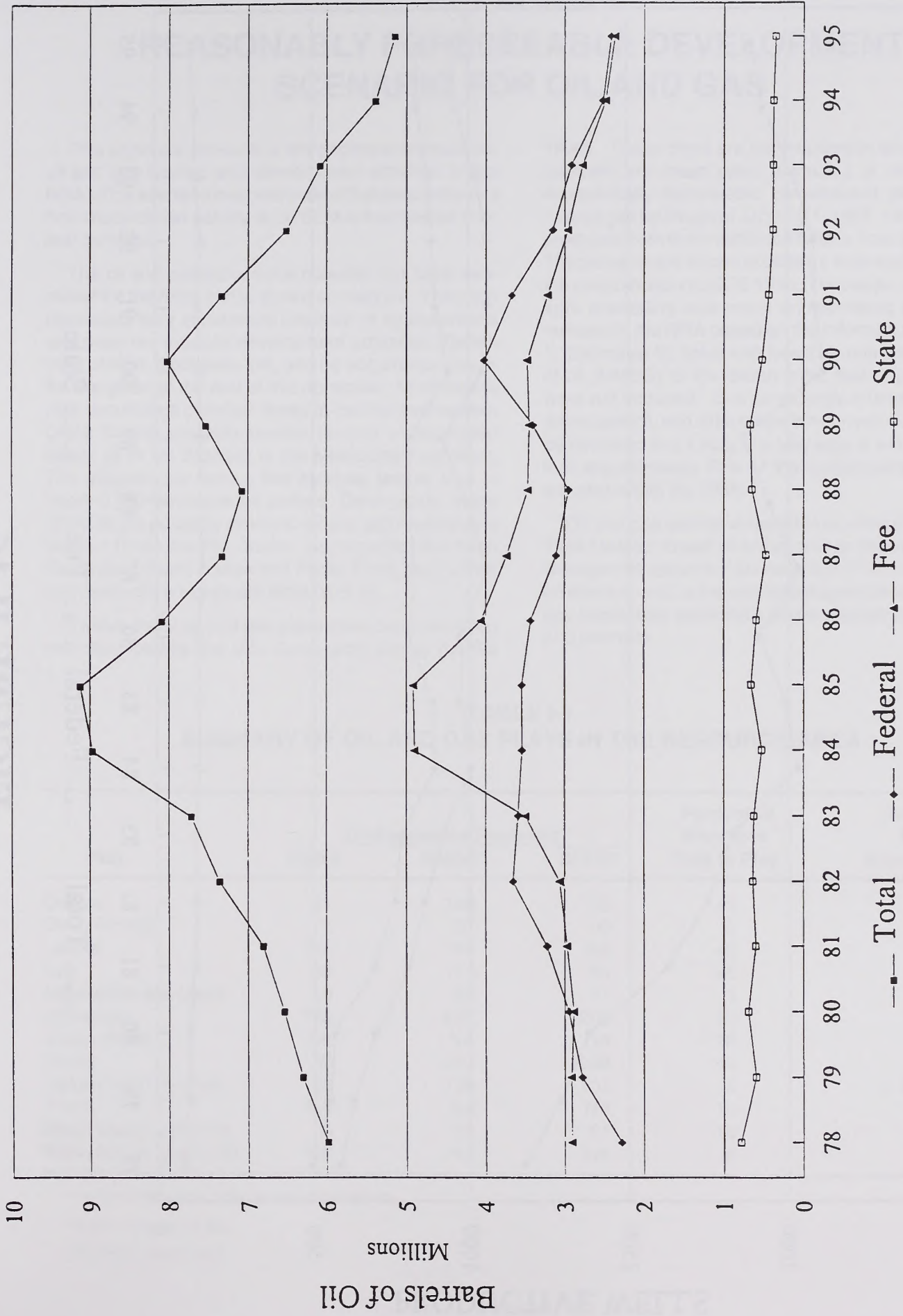


FIGURE H-15

PRODUCING OIL WELLS

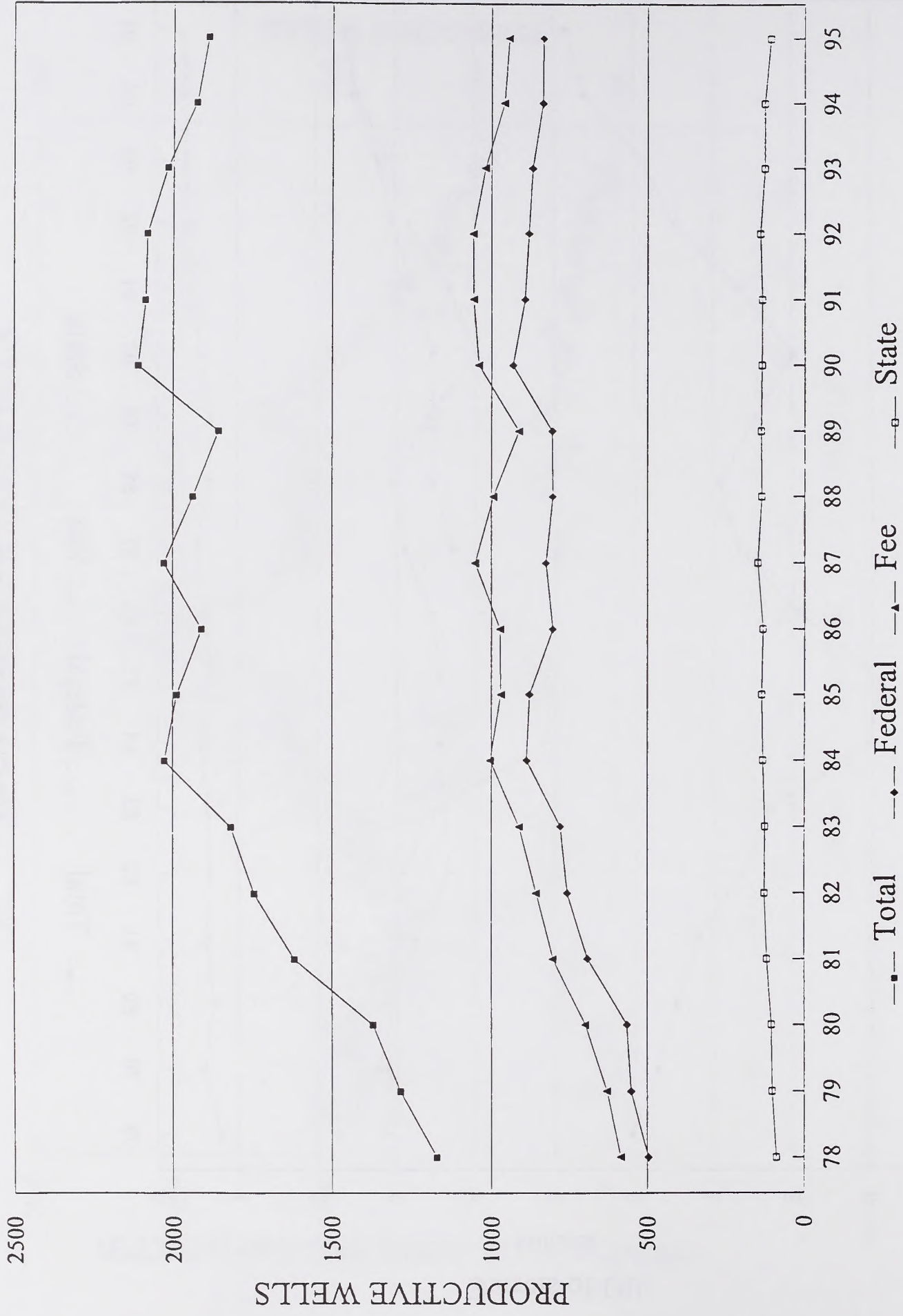


FIGURE H-16

APPENDIX I

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO FOR OIL AND GAS

This appendix presents a development scenario for oil and gas leasing and development activities in the NRA. This scenario is an estimate of future activity and how much of this activity is on BLM-administered mineral acreage.

The oil and gas occurrence potential has been estimated for the NRA and is shown on map I-1. This map represents only occurrence potential of hydrocarbons and does not indicate development potential. Definitions of high, moderate, low, and no occurrence potential are given at the end of this appendix. Moderate to high occurrence potential areas in central and eastern Crook County probably contain several undiscovered heavy oil or tar deposits in the Minnelusa Formation. The deposits are from a few hundred feet or less to nearly 2,000 feet below the surface. Geologically, these deposits are probably similar to oil and gas reservoirs in western Crook County. So far, two deposits have been discovered (Burnt Hollow and Rocky Ford), but neither has produced a significant amount of oil.

Twelve major oil and gas plays have been identified and described by the U.S. Geological Survey (USGS

1990). These plays are summarized in table I-1. The numbers are mean value estimates of undiscovered economically recoverable conventional oil, gas, and natural gas liquids as of January 1, 1987. Most of the oil produced from fields within the NRA is from these plays. The percentages shown in table I-1 were estimated from the maps shown in USGS 1990. The reader is cautioned from estimating how much undiscovered oil and gas remains in the NRA based on the information in table I-1. Estimates for fields with less than one million barrels of oil (MMBO) or six billion cubic feet of gas (BCFG) were not included. Due to geologic changes, uneven development, and differences in reservoir size, it cannot be assumed that if 20% of a play area is within the NRA that approximately 20% of the undiscovered reserves are also within the NRA.

Oil and gas activity in the NRA is primarily based on three factors: crude oil prices and anticipated oil price changes; development of new plays or renewed interest in old plays; and, advances in and application of technology (especially secondary and enhanced oil recovery, and seismic).

TABLE I-1
SUMMARY OF OIL AND GAS PLAYS IN THE RESOURCE AREA

Play	Undiscovered Reserves			Percent of Resource Area in Play	Percent of Play in Resource Area
	Fluids	MMBO ^a	BCFG ^b		
Dakota	21	158	158	45	20
Deep Frontier	6	37	99	5	10
Lakota	NA	NA	NA	45	20
Leo	60	110	60	45	50
Mesaverde and Lewis	10	66	91	1	1
Minnelusa	165	822	203	70	35
Mowry Shale	NA	NA	NA	10	10
Muddy	39	1333	1298	40	15
Sussex and Shannon	20	128	103	5	0 Sx, 5 Sh
Turner	NA	NA	NA	15	40
Basin Margin Anticline	5	25	21	10	10
Basin Margin Subthrust	NA	NA	NA	5	25

^a Million barrels of oil; includes natural gas liquids.

^b Billion cubic feet of gas.

SOURCE: USGS 1990.

These factors are difficult to predict with much certainty, but some generalizations are possible. The estimates presented in this appendix are based on past trends and current information. What actually happens may be significantly different.

LEASING

Leasing is an early phase in oil and gas development and is often based on speculation. In the NRA it is anticipated that oil and gas leasing will continue at approximately the 1990 levels. It is estimated that 50,000 to 250,000 acres per year in the NRA will be put up for lease. In 1994 this will increase about 50 thousand acres. After that it is estimated about 75,000 to 250,000 acres will be put up for lease annually.

Although the amount will vary considerably from sale to sale, it is estimated that approximately 30% of the acreage put up for lease will be sold competitively. The variation will depend mostly on crude oil prices and play developments. Most of the acreage leased competitively will be in areas of moderate or greater development potential (map I-2 and appendix H). Much of the acreage not sold competitively will be leased over the counter within two years after the sale.

It is estimated that the total amount of acreage under lease will vary somewhat but average about 1.0 to 1.5 million acres; about 0.5 million acres will remain unleased. Most of the unleased acreage will be in areas of low development potential (map I-2).

SEISMIC

Between 1987 and 1992 a total of 41 NOIs (6.8 per year) were filed. It is anticipated that seismic activity will average about the same as it was between 1987 and 1992. A significant increase in seismic activity will depend mainly on new play developments. The activity will probably be concentrated in westernmost Crook County, northwestern Weston County, and northern Niobrara County.

OIL AND GAS DRILLING OPERATIONS

Historically there is a correlation between the total number of approved drilling permits (fee, state, and federal) and oil price. Data from the last three years seems to indicate a lower level of drilling for a given oil price (figure I-1). The line shows linear regressions for 1977 through 1987 and 1988 through 1990 data. Whether or not the lower trend will prove to be valid remains to be seen, but it does appear that the trend established by the 1977 through 1987 data is no longer valid.

The annual number of approved drilling permits is expected to remain between 50 and 300 with a few exceptions. It is not considered likely that the number of approved permits will reach the level it was between 1980 and 1985 (figure I-1). It is anticipated that the number of permits will not vary directly with oil price until the price or anticipated price exceeds \$25 per barrel. If a new and relatively widespread play develops in the NRA, the number of permits would increase, but the amount is impossible to predict.

Federal APDs have been 44% to 68% (averaged 54%) of the total approved permits from 1987 through 1992 (figure I-2); this is not expected to change significantly. With few exceptions the number of federal APDs is expected to be between 50 and 150 during the next ten years.

New field discoveries have averaged 4.1 per year from 1977 to 1991 according to Wyoming Oil and Gas Conservation Commission statistics. If this rate continues there should be several new discoveries involving federal minerals in the next 10 years. The number of new fields discovered is anticipated to average between two and six fields per year during the life of this plan. Field size distribution indicates that the average size of new field discoveries has declined steadily with one exception since 1959. The average size of new field discoveries is anticipated to be two to four producing wells, and the maximum size is not expected to exceed 15 producing wells.

Recently, there has been considerable interest in horizontal drilling to develop fractured reservoirs. Horizontal drilling is not expected to have a large impact in the NRA because only a relatively small part of the resource area appears to have the necessary geologic factors for fractured reservoirs.

OIL AND GAS PRODUCTION OPERATIONS

Although the total number of producing wells has increased steadily (figure I-3) the number of productive federal wells has decreased slightly (about 1%) since 1987. The total number of federal wells including shut-in, temporarily abandoned, and service wells has also declined slightly (figure I-4). It is anticipated that the number of productive federal wells will remain near 1,000 or decrease slightly over the life of this plan. The total number of federal wells (producing, shut-in, and service) is also expected to remain approximately constant or decrease slightly.

Oil production increased in both absolute and relative amounts from 1977 to 1985 (figure I-5), but it has

APPENDIX I

decreased somewhat since then. If carbon dioxide becomes available at economic prices in the NRA, several EOR projects will probably be initiated. These will most likely be concentrated in western Crook County and northwest Weston County. If this occurs, oil production from the NRA would probably increase somewhat or at least decline more slowly. New discoveries will probably keep oil production from declining steeply from present levels and may result in some increases, but sharp increases in production are not expected.

Non-associated gas production in the NRA, compared to oil production, is small. This is not expected to change without the development of a major gas play which is unlikely.

DEFINITIONS OF OIL AND GAS OCCURRENCE POTENTIAL

High

There is a demonstrated existence of petroleum source, reservoir quality strata, and traps. Areas of high

potential have discovered oil occurrences or free oil recovery from well tests.

Moderate

There is direct or indirect geological evidence that petroleum source, reservoir quality strata, and trapping mechanisms are present. Discovered occurrences are not present, but there may be shows of oil in core or well tests.

Low

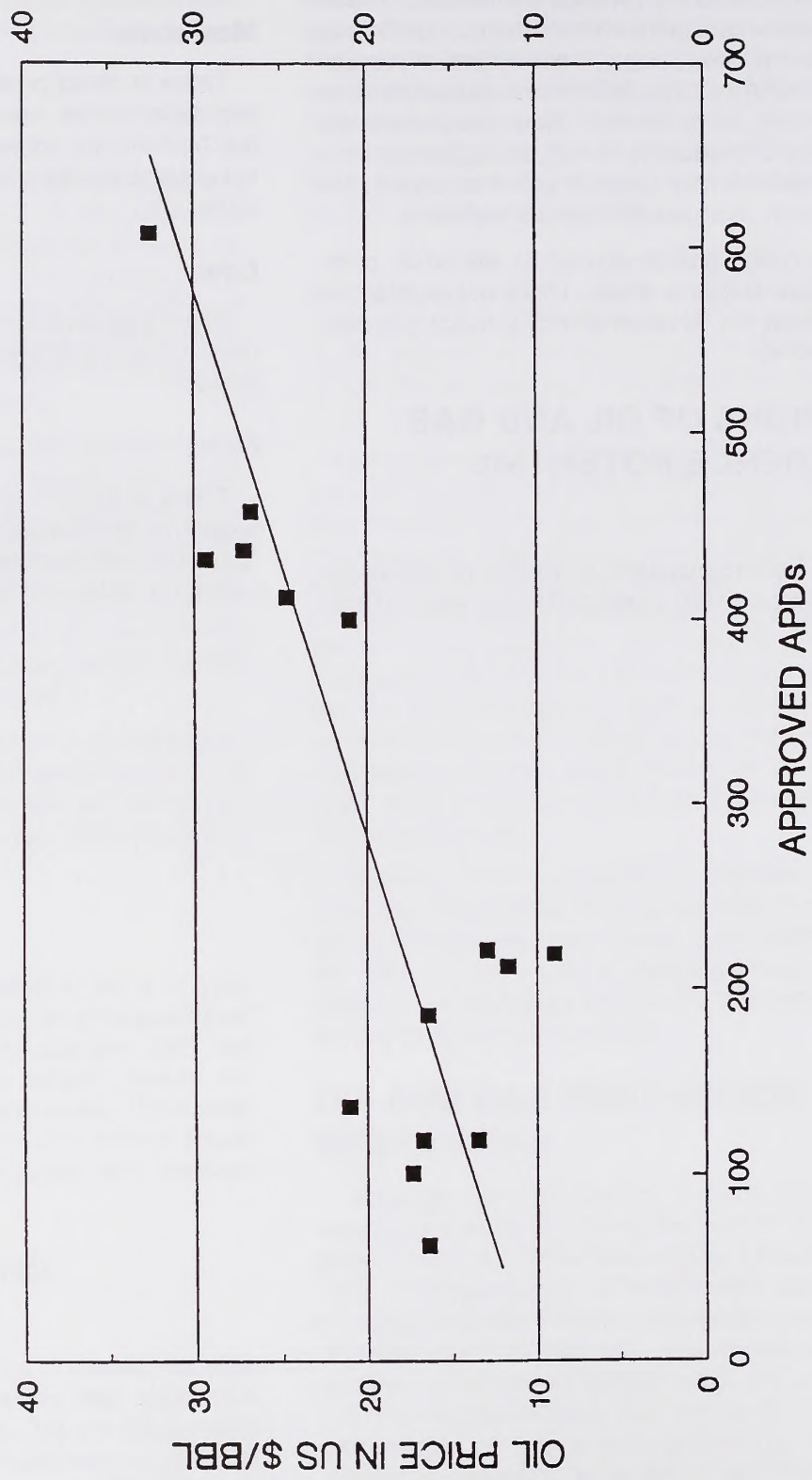
There is geological evidence that a petroleum source, reservoir quality strata, or a trapping mechanism is not present.

None

There is a demonstrated absence of a petroleum source, reservoir quality strata, or trapping mechanism. "Demonstrated absence" means physical evidence documented in geological literature.

TOTAL APDs COMPARED TO OIL PRICE 1978-1992

LINEAR REGRESSION LINE IS SHOWN ($r^2 = .65$)

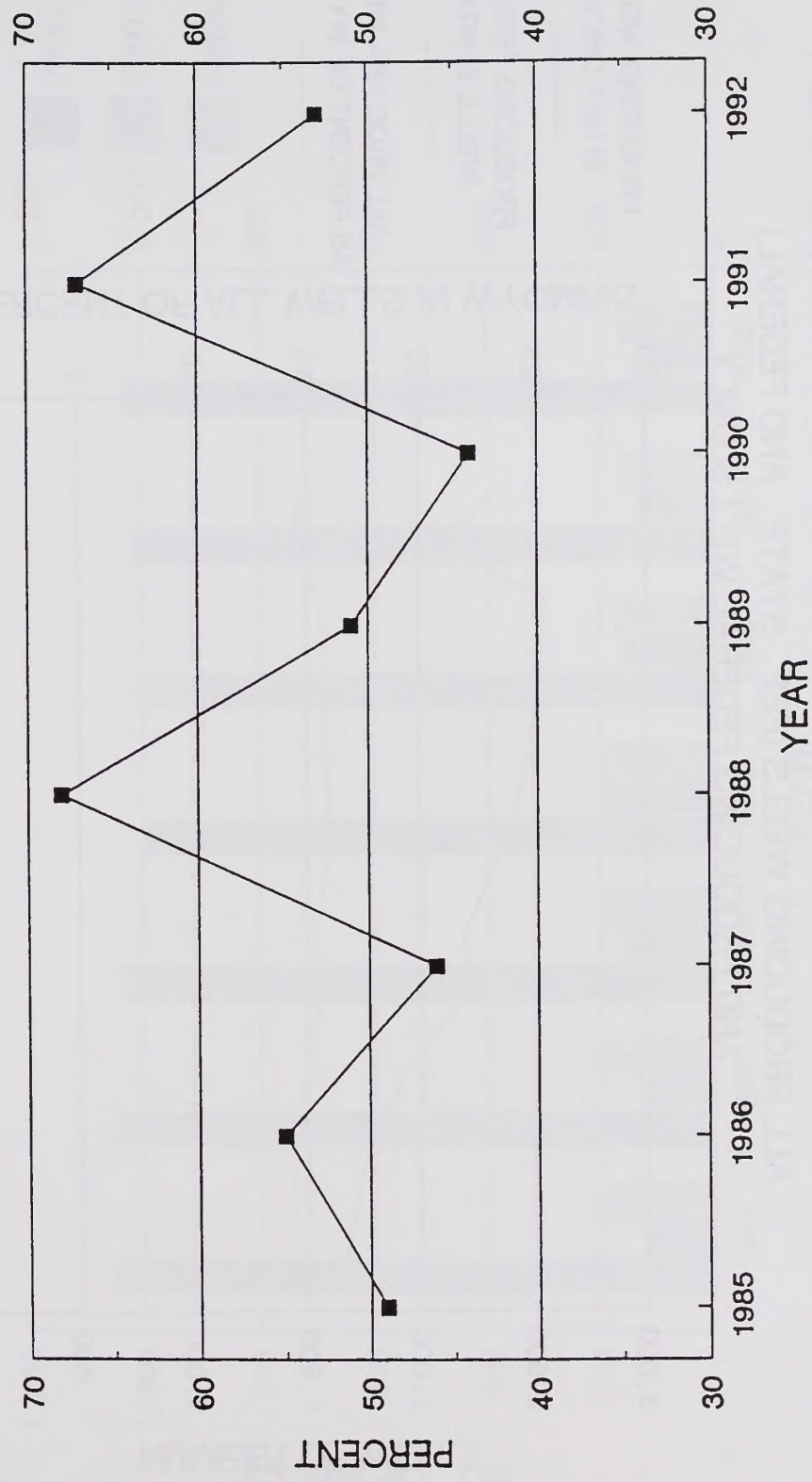


SOURCE: Data are from the Wyoming Oil and Gas Conservation Commission and the Wyoming Geological Survey.

FIGURE I-1

FEDERAL APDs AS A PERCENT OF ALL APDs

NRA 1985-1992



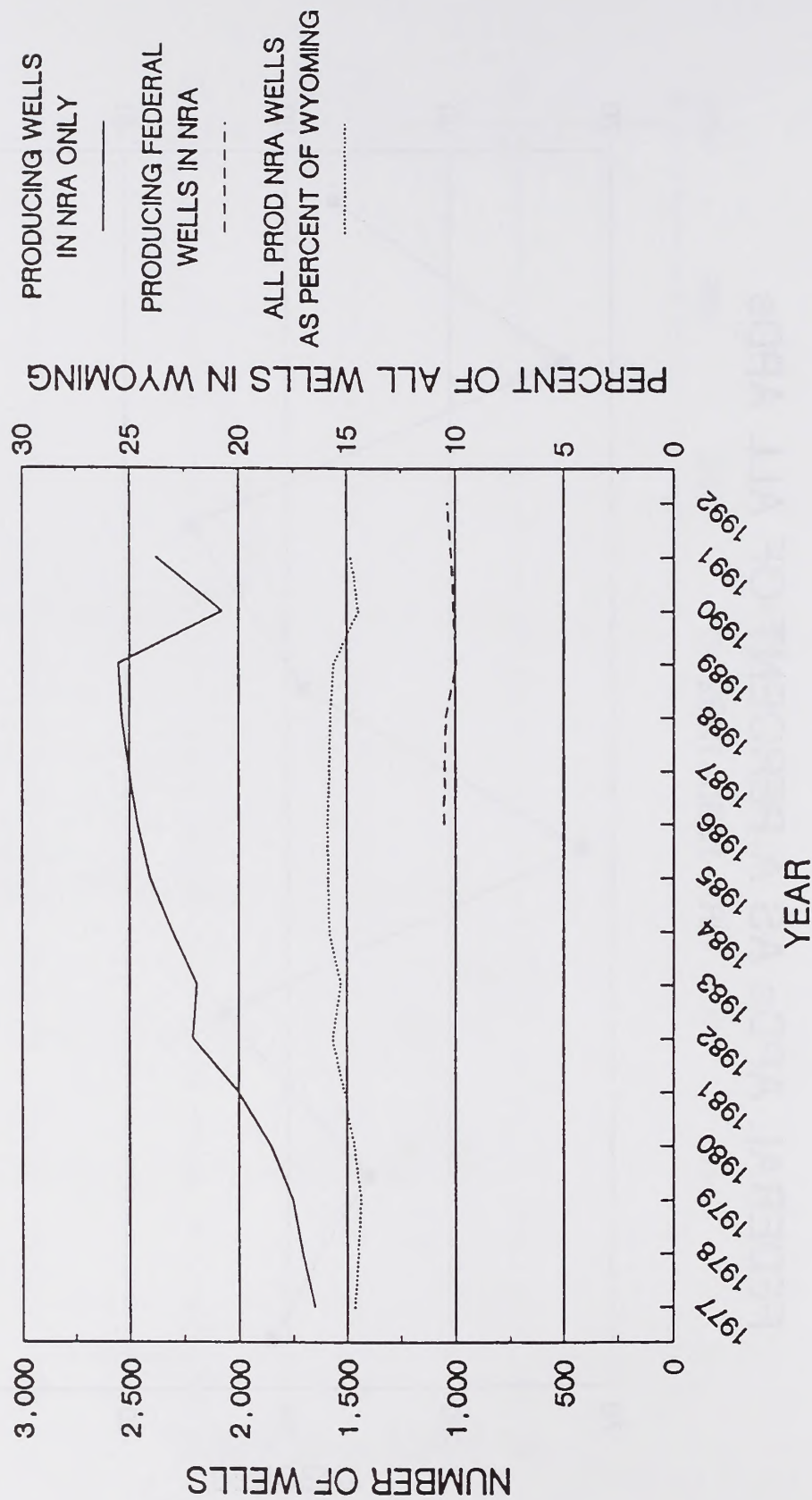
SOURCE: Data are from the Wyoming Oil and Gas Conservation Commission and BLM files.

FIGURE I-2

PRODUCING WELLS IN NEWCASTLE RESOURCE AREA

ALL PRODUCING WELLS (FEE, STATE, AND FEDERAL)

AND PRODUCING FEDERAL WELLS ONLY



SOURCE: Data are from the Wyoming Oil and Gas Conservation Commission and BLM files.

FIGURE I-3

FEDERAL WELLS PRODUCING, SHUT-IN, AND SERVICE (INJECTION)

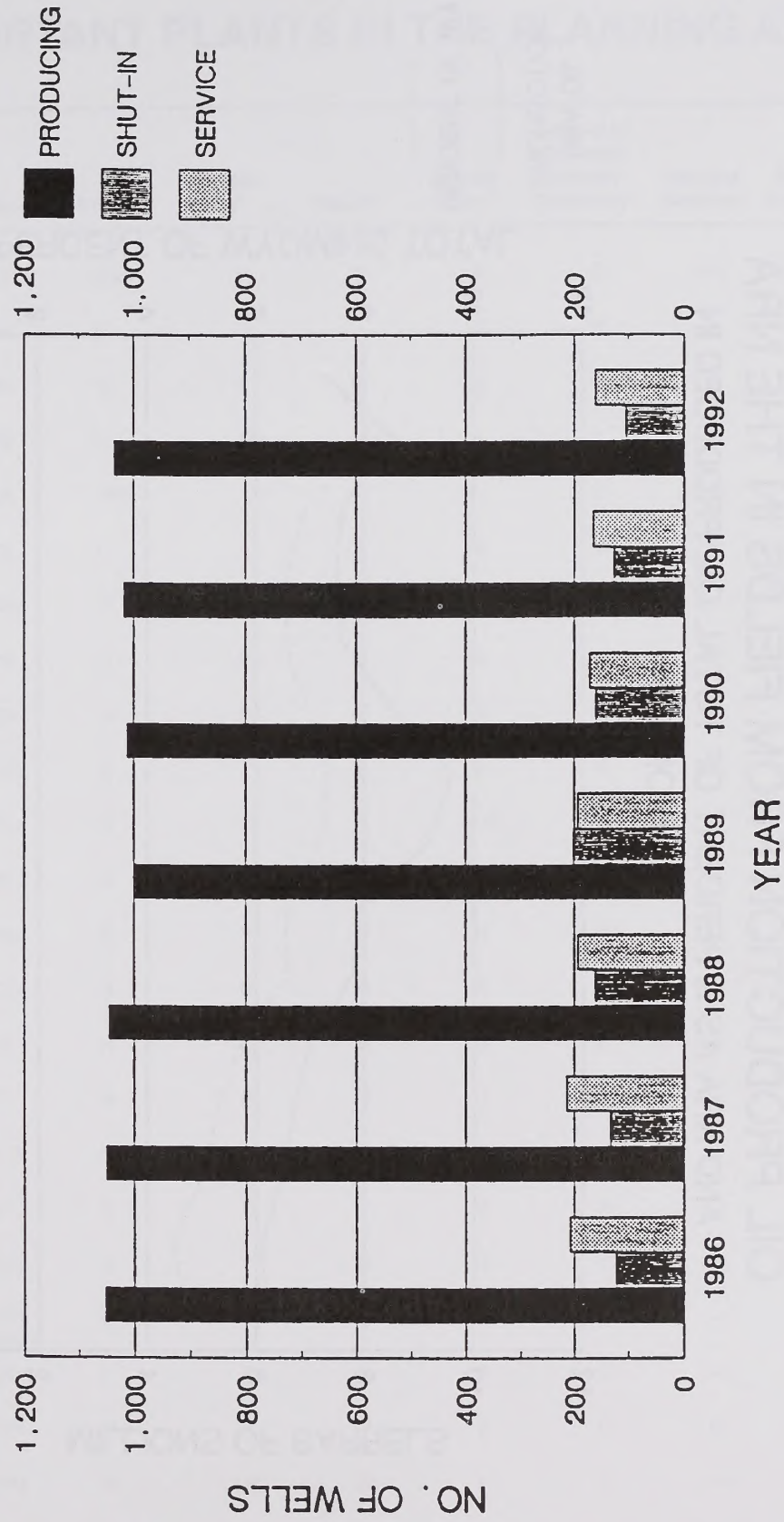


FIGURE I-4

OIL PRODUCTION FROM FIELDS IN THE NRA AND NRA AS A PERCENT OF TOTAL OIL PRODUCED IN WYOMING

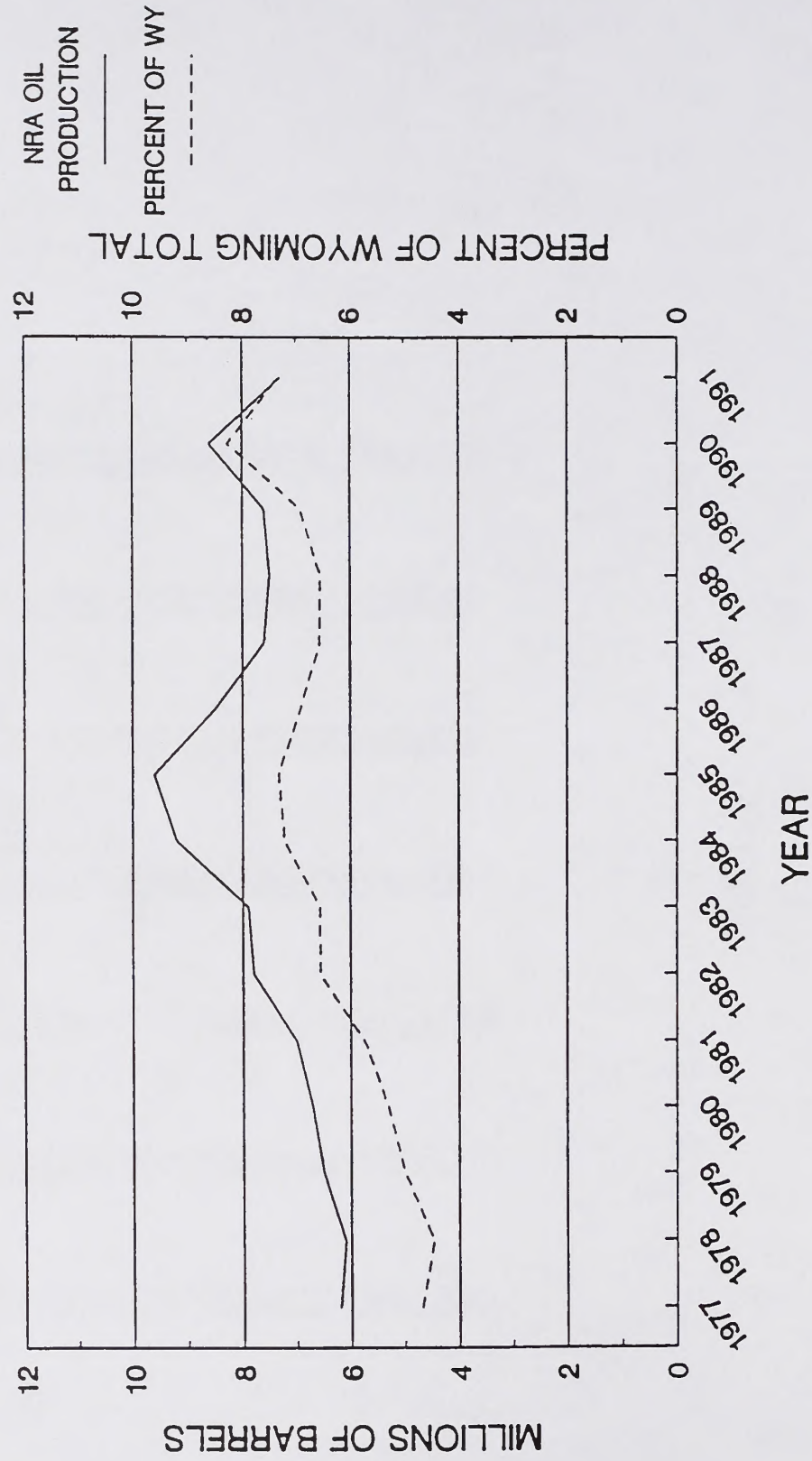


FIGURE I-5

APPENDIX J

PLANT SPECIES AND ECOLOGICAL CHARACTERISTICS OF IMPORTANT PLANTS IN THE PLANNING AREA

Common and Scientific Name	Symbol	Origin ^a	Longevity ^b	Height ^c	Growth Form ^d	Season of Maximum Growth/Flowering ^e	Grazing Behavior ^f	Important Distribution ^g	General Forage Value ^h
Grasses									
Bluegrass, Kentucky <i>Poa pratensis</i>	POPR	I/NA	P	M	R	C	Iv/Ic	T, M	G
Bluestem, Big <i>Andropogon gerardii</i>	ANGE	N	P	T	R	W	D	T	G
Bluestem, Little <i>Schizachyrium scoparium</i>	SCSC	N	P	M	B	W	D	T	G
Brome, Downy <i>Bromus tectorum</i>	BRTE	I	A	—	—	C	IV	M	G-P
Brome, Japanese <i>Bromus Japonicus</i>	BRJA	I/NA	A	—	—	C	Iv/Ic	M	G-P
Brome, Smooth <i>Bromus inermis</i>	BRIN	I	P	T	R	C	Iv	T	G
Buffalograss <i>Buchloe dactyloides</i>	BUDA	N	P	S	ST	W	Ic-L	M	G
Cordgrass, Prairie <i>Spartina pectinata</i>	SPPE	N	P	T	R	W	D	T	G
Dropseed, Sand <i>Sporobolus cryptandrus</i>	SPCR	N	P	M	B	W	Ic	M	F
Grama, Blue <i>Bouteloua gracilis</i>	BORG	N	P	S	B	W	Ic-L	M	G
Grama, Sideoats <i>Bouteloua curtipendula</i>	BOCU	N	P	M	B-R	W	Ic	T, M	G
Grass, Porcupine <i>Stipa spartea</i>	STSP	N	P	T	B	C	D	T	G
Indiangrass <i>Sorghastrum nutans</i>	SONA	N	P	T	B	W	D	T	G
Needle-and-thread <i>Stipa comata</i>	STCO	N	P	M	B	C	Ic-H	M	G
Needlegrass, Green <i>Stipa viridula</i>	STVI	N	P	M	B	C	D	M	G
Saltgrass, Inland <i>Distichlis stricta</i>	DIST	N	P	M	R	W	Ic	M	F
Sandreed, Prairie <i>Calamovilfa longifolia</i>	CALO	N	P	T	R	W	Ic	T, M	F
Switchgrass <i>Panicum virgatum</i>	PAVI	N	P	T	R	W	D	T	G
Threeawn, Red <i>Aristida longiseta</i>	ARLO	N	P	M	B	W	Ic-L	M	P
Wheatgrass, Crested <i>Agropyron cristatum</i>	AGCR (AGDE)	I	P	M	B	C	—	M	G
Wheatgrass, Intermediate <i>Agropyron intermedium</i>	AGIN	I	P	T	R	C	—	M	G
Wheatgrass, Slender <i>Agropyron trachycaulum</i>	AGTR	N	P	M	B	C	D	T & M	G
Wheatgrass, Western <i>Agropyron smithii</i>	AGSM	N	P	M	R	C	Ic-H	M	G
Wildrye, Canada <i>Elymus Canadensis</i>	ELCA	N	P	T	B	C	D	T	G
Wildrye, Russian <i>Elymus junceus</i>	ELJU	I	P	M	B	C	—	M	G

APPENDIX J

PLANT SPECIES AND ECOLOGICAL CHARACTERISTICS OF IMPORTANT PLANTS IN THE PLANNING AREA (continued)

Common and Scientific Name	Symbol	Origin ^a	Longevity ^b	Height ^c	Growth Form ^d	Season of Maximum Growth/Flowering ^e	Grazing Behavior ^f	Important Distribution ^g	General Forage Value ^h
Grass-like									
Sedge, Needleleaf <i>Carex eleocharis</i>	CAEL	N	P	S	R	C	Ic	M	F
Sedge, Sun <i>Carex heliophila</i>	CAHE	N	P	S	R	C	D	T & M	G
Sedge, Threadleaf <i>Carex filifolia</i>	CAFI	N	P	S	B	C	Ic-H	M	G
Forbs									
Alfalfa <i>Medicago sativa</i>	MESA	I	P	M	SS	W	—	M, T	G
Boneset, False <i>Kuhnia eupatorioides</i>	KUEU	N	P	M	SS	W	D	T, M	G
Coneflower, Prairie <i>Ratibida columnifera</i>	RACO	N	P	M	SS	W	Ic-H	M, T	G
Crazyweed, Lambert <i>Oxytropis lambertii</i>	OXLA (AGDE)	N	P	M	SS	C	Ic	M	P
Dalea, Bigtop <i>Dalea enneandra</i>	DAEN	N	P	M	SS	W	D	M	G
Deathcama <i>Zygadenus paniculatus</i>	ZYPA	N	P	S-M	SS	C	Ic	M	Po
Gayfeather, Dotted <i>Liatris punctata</i>	LIPU	N	P	M	SS	W	D	M	G
Globemallow, Scarlet <i>Sphaeralcea coccinea</i>	SPCO	N	P	S	SS	W	Ic	M	F
Goldenrod, Missouri <i>Solidago missouriensis</i>	SOMI	N	P	M	RS	W	Ic	T	P
Goldenrod, Stiff <i>Solidago rigida</i>	SORI	N	P	M	RS	W	Ic	T	P
Gumweed, Curlycup <i>Grindelia squarrosa</i>	GRSO	N	B	M	SS	W	Iv	M	P
Milkvetch, Groundplu <i>Astragalus crassicaupus</i>	ASCR	N	P	S	SS	C	D	M	G
Plume, Prince's <i>Stanleya pinnata</i>	STPI	N	P	M	SS	C	Ic	M	Po
Poisonvetch, Racemed <i>Astragalus racemosus</i>	ASRA	N	P	M	SS	C	Ic	M	Po
Poisonvetch, Twogrooved <i>Astragalus bisulcatus</i>	ASBI	N	P	M	SS	C	Ic	M	Po
Prairieclover, Purple <i>Petalostemon purpureum</i>	PEPU	N	P	M	(SS)	W	D	M	G
Sagewort, Cudweed <i>Artemisia ludoviciana</i>	ARLU	N	P	S-M	RS	C-F	Ic	M	P
Sampson, Black <i>Echinacea angustifolia</i>	ECAN	N	P	M	SS	W	D	T, M	G
Scurfpea, Silverleaf <i>Psoealea agrophylla</i>	PSAR	N	P	M	SS	C	Ic	M	P
Scurfpea, Slimflower <i>Psoralea tenuiflora</i>	PSTE	N	P	M	SS	C	Ic	M	P
Sunflower, Common <i>Helianthus annuus</i>	HEAN	N	A	—	SS	W	Ic-Iv	M	G

APPENDIX J

PLANT SPECIES AND ECOLOGICAL CHARACTERISTICS OF IMPORTANT PLANTS IN THE PLANNING AREA (continued)

Common and Scientific Name	Symbol	Origin ^a	Longevity ^b	Height ^c	Growth Form ^d	Season of Maximum Growth/Flowering ^e	Grazing Behavior ^f	Important Distribution ^g	General Forage Value ^h
Forbs (continued)									
Sunflower, Maximilian <i>Helianthus maximiliana</i>	HEMA	N	P	T	RS	W	S	T	G
Sunflower, Stiff <i>Helianthus rigidus</i>	AERI	N	P	T	RS	W	D	TP	G
Sweetclover, Yellow <i>Melilotus officinalis</i>	MEOF	I/Na	B	S/M/T	SS	W	Iv/Ic	M	G
Vetch, American <i>Vicia Americana</i>	VIAM	N	P	S	SS	W	D	M	G
Semishrubs									
Sagewort, Fringed <i>Artemisia frigida</i>	ARFR	N	P	S-M	RS	C-F	Ic	M	P
Snakeweed, Broom <i>Gutierrezia sarothrae</i>	GUSA	N	P	M	SS	W	Ic	M	P
Yucca <i>Yucca glauca</i>	YUGL	N	P	M	RS	W	Ic	M	P
Shrubs									
Leadplant <i>Amorpha canescens</i>	AMCA	N	P	M	SS	W	D	T	G
Sagebrush, Big <i>Artemisia tridentata</i>	ARTR	N	P	S/M/T	SS	C-F	Ic	M	P
Sagebrush, Silver <i>Artemisia cana</i>	ARCA	N	P	M-T	RS	C-P	Ic	M	F
Snowberry, Western <i>Symphoricarpos occidentalis</i>	SYOC	N	P	M	RS	W	Ic	M, T	F
Tree									
Chokecherry, Common <i>Prunus virginiana</i>	PRUI	N	P	T	SS	C	D	T	Po
Succulents									
Pear, Prickly <i>Opuntia polyacantha</i>	OPPO	N	P	S	—	W	Ic	M	P

^aI = introduced, N = native, Na = naturalized

^bA = annual, B = biennial, P = perennial

^cS = short, M = mid, T = tall

^dB = bunch, R = rhizomatous, ST = stolons, SS = single stem, RS = rootsocks

^eC = cool, W = warm, C-F = fall growth

^fGrazing behavior on a medium-textured soil: D = decreaser, Ic = increaser, Ic-H = high level increaser, Ic-L = low level increaser, Iv = invader

^gM = mixed prairie, T = true prairie

^hG = good, F = fair, P = poor, Po = poisonous

SOURCE: USDI, BLM 1981a, 1981b, 1981c.

APPENDIX K

POISONOUS PLANTS

Common/Scientific Name	Animals Endangered	Seasonal Toxicity
Deathcamus (<i>Zygadenus paniculatus</i>)	Sheep Cattle Horse	early spring and all season
Larkspur (<i>Delphinium nelsonii</i>)	Cattle Sheep Horse	summer and fall
Locoweed (<i>Astragalus spp.</i>)	Horse Cattle Sheep	year-round
Arrowgrass (<i>Triglochin maritima</i> and <i>Triglochin palustris</i>)	Sheep Cattle	summer and fall
Greasewood (<i>Sarcobatus vermiculatus</i>)	Sheep Cattle	fall
Halogeton (<i>Golmeratus</i>)	Sheep Cattle	year-round

NOTE: (In the "Animals Endangered" column, the names are listed in order of the animal's susceptibility to the poison plant.) For additional information, see "22 Plants Poisonous to Livestock in the Western States." USDA, Agriculture Info. Bulletin 327, April 1968.

SOURCE: USDI, BLM 1981a, 1981b, 1981c.

APPENDIX L

POPULATION AND HABITAT VARIABLES MATRIX FOR BIRD AND MAMMAL SPECIES OF SPECIAL CONCERN

Species	Population	Habitat	Special Concern
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

POPULATION AND HABITAT VARIABLES MATRIX FOR BIRD AND MAMMAL SPECIES OF SPECIAL CONCERN

Species	Population	Habitat	Special Concern
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

POPULATION AND HABITAT

POPULATION AND HABITAT VARIABLES MATRIX FOR BIRD SPECIES OF SPECIAL CONCERN¹

Birds	A. Ongoing significant loss of habitat	B. Habitat is restricted or vulnerable but not recent or on-going significant loss; species may be sensitive to human disturbance	C. Habitat is not restricted, vulnerable but no loss; species is not sensitive to human disturbance	D. Habitat is stable and not restricted
1. Populations are greatly restricted or declining - extirpation appears possible	SSC1 Common Loon	SSC2	SSC3	
2. Populations are declining or restricted in numbers and/or distribution - extirpation is not imminent	SSC2 Trumpeter Swan Bald Eagle Yellow-billed Cuckoo	SSC3 American White Pelican American Bittern Black-crowned Night-Heron White-face Ibis Forster's Tern Black Tern Merlin Peregrine Falcon Long-billed Curlew Lewis' Woodpecker		
3. Species is widely distributed; population status and trends are suspected to be stable	SSC3 Ferruginous Hawk	SSC4 Northern Goshawk		
4. Populations are stable or increasing and not restricted in numbers and/or distribution				

POPULATION AND HABITAT VARIABLES MATRIX FOR MAMMAL SPECIES OF SPECIAL CONCERN¹

Mammals	A. Ongoing significant loss of habitat	B. Habitat is restricted or vulnerable but not recent or on-going significant loss; species may be sensitive to human disturbance	C. Habitat is not restricted, vulnerable but no loss; species is not sensitive to human disturbance	D. Habitat is stable and not restricted
1. Populations are greatly restricted or declining - extirpation appears possible	SSC1 Black-footed Ferret	SSC2	SSC3	
2. Populations are declining or restricted in numbers and/or distribution - extirpation is not imminent	SSC2 Long-eared Myotis Northern Myotis Fringed Myotis Long-legged Myotis Townsend's Big-eared Bat Pallid Bat Lynx	SSC3 Black-tailed Prairie Dog Swift Fox		
3. Species is widely distributed; population status and trends are suspected to be stable	SSC3 Little Brown Myotis Big Brown Bat Western Small-footed Myotis			
4. Populations are stable or increasing and not restricted in numbers and/or distribution				

¹WGFD 1996.

APPENDIX M

PUBLIC PARTICIPATION DOCUMENTATION

mendment is to incorporate the latest LLM supplemental program guidance (36LM Manual section 1624.2) for fluid minerals and to evaluate identified special Management Areas (SMA's) for their potential as Areas of Critical Environmental Concern (ACEC). The planning action will result in a determination as to which public lands and minerals should be made available for oil and gas development through leasing, and what lease stipulations may be necessary to protect other resource values. The issues anticipated include:

1. Determining if existing lease stipulations are proper and sufficient to protect other resource values.
 2. Determining if there is additional Federal mineral estate that should be considered for oil and gas leasing.
 3. Identifying the cumulative impacts of oil and gas development.
 4. Clarification of stipulations applied to lease issuance and conditions of approval applied prior to development activities.
 5. Identifying lease stipulations necessary to address Indian concerns and protect wildlife, fragile soils, water resources and other resource values.
 6. Determining the impact of lease stipulations on oil and gas development.
 7. Determining what effect fluid mineral leasing activities have on designated ACEC's and SMA's, given reasonable, foreseeable development scenarios.
 8. Evaluating identified special management areas to determine if they qualify for ACEC designation.
- The preliminary planning criteria used to address these issues are summarized below:

1. Consult with appropriate representatives of the oil and gas industry to identify mineral potential.
 2. Apply applicable laws and stipulations to identify land eligible for leasing.
 3. Assess the suitability of the land to our oil and gas development, and the availability of oil and gas resources.
 4. Compare the public values of oil and gas development with the public values of other alternative uses which may be precluded or impacted.
- The plan amendments will be prepared using a variety of resource specialists including persons trained in geology, hydrology, soils, air, wildlife, age, recreation, realty, surface protection and economics.

TESTS: Public comment on the proposed uses, planning criteria and resource stipulations will be accepted for 30 days following publication of this Notice. In addition, public scoping meetings will be held in November. At least two weeks

advance notice of the time and dates of these meetings will be provided. Additional public participation opportunities will be provided throughout the development of this RMP Amendment.

ADDRESSES: Comments should be addressed to Ron Fellows, Area Manager, Bureau of Land Management, 1235 La Plata Highway, Farmington, NM 87401.

FOR FURTHER INFORMATION CONTACT: Joel E. Farrell, 1235 La Plata Highway, Farmington, NM 87401, (505) 327-5344.

Dated: September 14, 1989.

Larry L. Woodard,

State Director.

[FR Doc. 89-22154 Filed 9-19-89; 8:45 am]

BILLING CODE 4310-FB-M

[WY-040-09-4300-90]

Rock Springs District Advisory Council Meeting

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of meeting of the Rock Springs District Advisory Council.

SUMMARY: This notice sets forth the schedule and agenda of a meeting of the Rock Springs District Advisory Council.

DATES: November 8, 1989, 9:30 a.m. until 4 p.m. and November 9, 1989, 8 a.m. until 3 p.m.

ADDRESS: Rock Springs District Office, Bureau of Land Management, Highway 191 North, Rock Springs, Wyoming 82901.

FOR FURTHER INFORMATION CONTACT: Donald H. Sweep, District Manager, Rock Springs District, Bureau of Land Management, P.O. Box 1869, Rock Springs, Wyoming 82902-1869, (307) 382-5350.

SUPPLEMENTARY INFORMATION: The agenda for the meeting will include:

November 8, 9:30 a.m.

1. Introduction and opening remarks
2. Review of minutes from last meeting
3. Wild Horse Program Update
4. Rangeland Planning and Implementation
5. Briefing Topics: Centennial Activities, Wilderness Status, QUEST Program, "2000" Initiatives, FY 90 Budget
6. Green River Resource Management Plan
7. District Planning and Environmental Efforts
8. Public Comment Period

November 9, 8 a.m.

1. Tour of Public Lands north of Rock Springs.

The meeting is open to the public. Interested persons may make oral statements to the Council between 3 p.m. and 4 p.m., November 8, or file written statements for the Council's consideration. Anyone wishing to make an oral statement should notify the District Manager at the above address by November 6, 1989.

Depending on the number of persons wishing to make oral statements, a time limit per person may be established by the District Manager.

Donald H. Sweep,

District Manager.

[FR Doc. 89-22203 Filed 9-19-89; 8:45 am]

BILLING CODE 4310-22-M

[WY-060-09-4410-08]

Intention To Prepare a Management Resource Plan; Newcastle Resource Area, WY

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of intent to prepare a Resource Management Plan and call for coal and other resource information for the Bureau of Land Management (BLM) Newcastle Resource Area, Casper District, Wyoming.

SUMMARY: The Casper District is initiating development of a resource management plan (RMP) to guide future management actions on the public lands within the Wyoming portion of the Newcastle Resource Area. An existing management framework plan (MFP) will continue to guide decisions for the Newcastle Resource Area until the RMP is completed.

The RMP will be a comprehensive land use plan that will allocate and identify public land and resource uses, resource condition management goals, land and resource use constraints, and general management practices needed to achieve RMP objectives. The plan will also identify lands to be retained in Federal ownership or to be considered for transfer from BLM administration (via public disposal, exchange, or transfer to another agency).

Requirements, standards, and procedures for preparing the Newcastle RMP/Environmental Impact Statement (EIS) are contained in 43 CFR parts 1600-1610 and BLM Manuals 1600-1631.

The RMP/EIS will conform with the BLM Washington Office guidance on standards for development of RMPs nationwide and the BLM Wyoming State Office guidance for RMP development in the State of Wyoming.

The Casper District will develop planning criteria to provide the public a preview of the types of management considerations that will be made in developing the RMP decisions.

DATE: The issue identification, planning criteria development, and inventory phases of the RMP/EIS process begins in October 1989. The RMP is scheduled to be completed by the Fall of 1992. Public meetings and other public involvement activities during the planning process will be announced through the Federal Register, local news media, and public mailings.

ADDRESS: Documentation of the RMP process and all planning documents will be available at: Newcastle Resource Area Office, 1501 Highway 16 Bypass, Newcastle, Wyoming 82701.

FOR FURTHER INFORMATION CONTACT: If you wish to be placed on the RMP mailing list, or if you wish to add to the list of public land and resource management issues, areas of conflict, or other problems and concerns to be considered in the RMP/EIS, contact Floyd Ewing, Newcastle Resource Area Manager, at the address above or telephone (307) 746-4453.

SUPPLEMENTARY INFORMATION: The Newcastle Resource Area includes Crook, Weston, and Niobrara counties in northeastern Wyoming, and the State of Nebraska. The RMP that is being initiated will address only the counties located in Wyoming. A separate planning analysis is being completed for Nebraska. The approximate acreage (in the Wyoming portion of the resource area) and the land and mineral ownership or administration is as follows:

Federal land surface and mineral estate both administered by the BLM—293,865 acres.

Federal mineral estate administered by the BLM; Federal land surface administered by other Federal agencies—400,800 acres.

Federal mineral estate administered by the BLM; land surface privately owned and or owned by the State of Wyoming—1,405,001 acres.

Land surface and minerals privately owned or owned by the State of Wyoming (over which the BLM has no administrative authority)—2,452,473 acres.

There is one designated area of environmental concern (ACEC), Whoop-up Canyon, which contains prehistoric petroglyphs, and one National Natural Landmark, Lance Creek, which is an extensive fossil area. Future management of these areas will be addressed in the RMP/EIS. Nominations for additional ACECs or other special

designation areas, such as wild and scenic river segments, will be considered.

Public participation is an essential component of RMP development. Several techniques for public involvement will be used at each phase of the RMP/EIS process including: Federal Register announcements, one-on-one discussions with key groups and individuals, public meetings, and individual mailings to all parties who have expressed an interest in the process. The BLM is requesting the public to help identify additional problems, conflicts, or resource management opportunities that should be addressed in the planning process. Preliminary issues that have been identified thus far are (a) surface disturbance caused by uses of public land or development activities on public land; (b) accessibility of public land and resources; (c) competition for vegetation among various users of the public lands, and (d) retention or disposal of surface estate administered by the BLM.

Dated: September 8, 1989.

F. William Eikenberry,

Associate State Director.

[FR Doc. 89-22204 Filed 9-19-89; 8:45 am]

BILLING CODE 4310-22-M

[CO-050-4410-10]

Intention To Prepare a Resource Management Plan/Environmental Impact Statement for the Royal Gorge Resource Area, CO

AGENCY: Bureau of Land Management, Interior.

ACTION: The Bureau of Land Management, Canon City District has begun preparation of the resource management plan (RMP) and associated environmental impact statement (EIS) for the Royal Gorge Resource Area in accordance with the Federal Land Policy and Management Act of 1976 (FLPMA) and 43 CFR part 1600.

SUMMARY: A resource management plan will be developed for the Royal Gorge Resource Area (RGRA). The intent of this planning action is to meet requirements of FLPMA and the National Environmental Policy Act (NEPA). This Resource Management Plan (RMP)/Environmental Impact Statement (EIS) will replace and supercede the three existing RGRA planning documents: the Raton Basin Management Framework Plan (RBMFP), the Royal Gorge Management Framework Plan (RGMFP), the Eastern

Plains Planning Analysis (EPPA), as well as all plan maintenance changes and amendments to these documents. Three types of decisions will be developed in this land use planning process: resource condition objective decisions, land use allocation decisions, and management action decisions. An implementation schedule will be established for the above decisions, all needed activity plans, any necessary support actions, and plan monitoring and maintenance.

DATES: Three open houses will be held within the Royal Gorge Resource Area: the first in Buena Vista, Colorado on Monday, January 8th, 1990, the second in Canon City, Colorado on Tuesday, January 9th, 1990, and the third in Walsenburg, Colorado on Wednesday, January 10th, 1990. Each open house will be held from 1:00 pm to 3:00 pm, and from 7:00 pm to 9:00 pm each day. The purpose of these open houses is to solicit public input on the RGRMP preliminary planning issues, obtain volunteers for the RMP/EIS workgroups, and to brief attendees on the Bureau's planning process. Additional meetings and public hearings will be held later in the planning process. Comments on the preliminary planning issues and the initial conceptual alternatives must be submitted on or before Friday, January 26th, 1990. The Draft RMP/EIS is tentatively scheduled for completion by Spring of 1991, with the Final RMP/EIS tentatively scheduled for completion by Spring of 1991, with the Final RMP/EIS being available in the Spring of 1992.

FOR FURTHER INFORMATION CONTACT: Interested parties may request a copy of the preliminary issues, volunteer for one or more of the RMP/EIS workgroups, and/or provide pertinent suggestions by writing: RMP Project, Bureau of Land Management, P.O. Box 1171, Canon City, Colorado 81212, or by calling the Project Leader, Dave Taliaferro at: (719) 275-0631.

SUPPLEMENTARY INFORMATION: Plan monitoring evaluations were completed on the Raton Basin Management Framework Plan (RBMFP), on the Royal Gorge Management Framework Plan (RGMFP), and on the Eastern Plains Planning Analysis (EPPA) during 1988 and 1989. These evaluations revealed significant deficiencies within these plans based on the specific program guidance and CFR 1600 planning regulations..

The RGRMP/EIS planning area will include all BLM managed lands within the following counties in the state of Colorado: Lake, Crowley, Chaffee, Kiowa, Park, Otero, Teller, Bent, El

Bureau of Land Management
1701 East E Street
Casper, WY 82601

91-08

DATE: April 5, 1991

CONTACT: Kate DuPont
261-7600

BLM NEWS

BLM REQUESTING PUBLIC INPUT

CASPER: The Bureau of Land Management is inviting public input into the development of a resource management plan for federal lands and minerals in Crook, Weston and Niobrara counties, announced Newcastle Resource Area Manager Floyd Ewing.

"This land use plan is a road map for the management of public lands and resources. It identifies management objectives for resources on public land such as recreational uses, grazing, minerals, timber, wildlife habitat, and cultural and historic sites. Adjustments in federal landownership that may be made through land sales or exchanges will also be identified," explained Ewing.

The Wyoming portion of the Newcastle Resource Area encompasses approximately 290,000 acres of federal surface and an additional 1.5 million acres of federal mineral estate where the surface is owned by someone other than the federal government.

"In order to identify issues important to the public, it is critical to obtain input during the initial development of the RMP, Ewing said.

The RMP will also incorporate an environmental impact statement in accordance with federal regulations. It will be made available in draft form for public review and comment. Persons interested in a copy of the draft after it is developed, or persons who have any concerns or suggestions on the management of resources within the three counties, can call the Newcastle RMP project leader or mail comments to 1101 Washington Blvd., Newcastle, Wyoming.

A public open house to explain the issues, discuss concerns and suggested management options for the area will be scheduled in Newcastle at a later date.

(END)

91-13

May 20, 1991

Kate DuPont
261-7600

OPEN HOUSE FOR
BUREAU OF LAND MANAGEMENT
RESOURCE MANAGEMENT PLAN

The Bureau of Land Management Newcastle Resource area is working on a resource management plan for federal lands and minerals in Crook, Weston, and Niobrara counties and is inviting the public to an open house to discuss issues and concerns regarding management decisions. BLM staff will be on hand to explain current management practices at the open house scheduled for June 20, from 9:a.m. to 4:p.m. at the Newcastle Resource Area office, 1101 Washington Blvd, Newcastle.

The Newcastle Resource Area Resource Management Plan, which incorporates an environmental impact statement will guide the management of approximately 290,000 acres of federal surface and an additional 1.5 million acres of federal mineral estate where the surface is owned by some other than the federal government for the next decade.

(END)

Hand--delivered May 20, 1991 to Wyoming Geological Association for their Newsletter

June 6, 1991

Dear Interested Citizen:

The Bureau of Land Management (BLM) has begun preparation of a resource management plan and environmental impact statement (RMP/EIS) for the Wyoming portion of the Newcastle Resource Area. The public is invited to an open house on June 20, 1991, from 9:00 a.m. to 8:00 p.m. at the Newcastle Resource Area Office, 1101 Washington Blvd., Newcastle, Wyoming.

The Federal Land Policy and Management Act of 1976 (FLPMA) requires the BLM to prepare a land use plan which addresses the management of public lands. This not only includes the surface estate managed by the BLM, but also the federal mineral estate which exists under federal, private, or state lands. Various approved land uses are documented in this resource management plan and environmental impact statement. An important part of developing the land use plan, as discussed in FLPMA, is public involvement. This includes public meetings, group discussions, hearings, and through written comments. Suggestions reviewed during preparation of the plan and prior to reaching management decisions in areas of public land management will be very important to the process.

The open house is part of the public participation process, also referred to as the "scoping process." At this time, resource specialists and managers will review potential issues, current management practices, and discuss alternative uses that can be considered in the RMP/EIS. Our focus will be to identify specific issues which need to be addressed in the planning process.

Your participation is a critical part of our planning process. We are anxious to visit with you and discuss an issue, concern, or opinion on future use of public resources. Additional information on the Newcastle Resource Area and the planning process is enclosed for your review.

Sincerely,

Floyd E. Ewing
Area Manager

Enclosure

Department of Interior
Bureau of Land Management
Casper District Office, Newcastle Resource Area

The Newcastle Resource Area (NRA) is one of three resource areas contained within the Casper District of the Wyoming Bureau of Land Management. Resource management in the Newcastle Area has been under the direction of a management framework plan (MFP) since it was approved in 1981 and updated in 1985. When the Newcastle RMP is approved, it will supersede the MFP.

The Newcastle RMP/EIS will provide a comprehensive framework for long-term management and allocation of the uses of public lands and resources in the planning area. The land pattern throughout the planning area is fragmented into numerous parcels of varying sizes. Public lands are intermingled with private and state lands and with federal lands managed by other federal agencies. The BLM is responsible for administering approximately 300,000 acres of public surface lands and almost 2 million acres of mineral estate, most of which is under private surface.

The primary function of the Newcastle Resource Area since it was established in 1977 has been the management of range, recreation, forest, wildlife habitat, locatable and salable minerals, and lands and realty functions. When the Minerals Management Service merged with BLM in 1983, the Newcastle Resource Area's responsibilities for fluid mineral development and management increased.

Currently all of the above programs are managed in the resource area in varying degrees. The RMP/EIS will explore the need to increase or decrease management emphasis. For instance, there is public interest in increasing the emphasis of recreation and wildlife. The RMP/EIS will explore ways to improve these activities by exploring the possibility of obtaining access to existing public lands through easements, land exchanges, or other types of agreements with individuals controlling access to the public.

Other options for management direction have been suggested by staff specialists for each program. Additional suggestions are encouraged. Comments or suggestion on any aspect of management of public lands in the Newcastle Resource Area can again be made by calling or writing:

Newcastle Resource Area
1101 Washington Blvd.
Newcastle, Wyoming 82701
307-746-4453

The public will be asked to comment when the draft RMP/EIS is released about January 1992. If you are interested in a copy, please contact the Newcastle Resource Area.

Bureau of Land Management
1701 East E Street
Casper, WY 82601

91-16

DATE: June 7, 1991

CONTACT: Kate DuPont
261-7600

BLM NEWS

BLM HOLDS OPEN HOUSE

CASPER: The Bureau of Land Management Newcastle Resource Area has scheduled a public open house June 20 to discuss the resource management plan and environmental impact statement currently being drafted. The open house will be held between 9:00 a.m. to 8:00 p.m. at the Newcastle Resource Area Office, 1101 Washington Blvd., Newcastle.

This RMP will be used as a guide to allocate resources and select appropriate uses for the public lands in the Wyoming portion of the Newcastle Resource Area which includes the counties of Crook, Weston, and Niobrara. An environmental impact statement, which meets the requirements of the National Environmental Policy Act, will be integrated with the RMP and will be presented in one document.

At the open house, BLM resource specialists and managers will review potential issues, current management practices, and discuss alternative uses that can be considered in the RMP/EIS. Primary program functions for the resource area are fluid and mineral development, range, recreation, forest, and wildlife management on some 300,000 acres of public surface lands and almost two million acres of mineral estate, most of which is under private surface.

"An important part of developing this land use plan is discussing with the public suggestions during the preparation of the plan and prior to reaching management decisions," Resource Area Manager Floyd Ewing said.

Persons unable to attend the open house can submit their comments by either writing to Newcastle Resource Area, 1101 Washington Blvd., Newcastle, Wyoming, 82701 or calling (307) 746-4453. Requests will also be taken from those who wish to review a copy of the draft RMP/EIS when it is released early in 1992.

(END)

October 11, 1991

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

See attached list

The Bureau of Land Management (BLM) is preparing a resource management plan (RMP) for Public Lands and resources in the Newcastle Resource Area, which includes Crook, Weston, and Niobrara Counties in Wyoming. The plan will determine how BLM actions are carried out in this region.

The plan includes a section describing cultural clearance procedures for land disturbance actions, as required by Section 106 of the National Historic Preservation Act.

The plan will include a discussion of proposed alternatives for managing the Whoopup Canyon Petroglyph site near Newcastle, Wyoming. The site was designated an Area of Critical Environmental Concern (ACEC) in 1981. No site protection measures have even been carried out because little was known about the site until recent surveys were conducted. The alternatives discussed for the site range widely from no action to development for public visitation. We are particularly concerned to know what you would prefer for this site.

We would also like to know if there are other religious or cultural areas in northeastern Wyoming which require special protection or consideration during land use planning. BLM does not have land holdings on Devils Tower, or Inyan Kara, although BLM parcels do occur within a few miles of these places. Among other known sacred areas, BLM does have land parcels on Sundance Mountain and Little Sundance (Green) Mountain. We would like to know if you have other areas of special concern and in general whether they occur in areas where BLM actions might take place. We can provide landownership maps if you need to check on particular areas. We are not asking you for specific locations of any such areas, but in general whether such places are present. Any information you provide will be considered strictly confidential.

We would like to know if you wish to be consulted during planning for specific BLM actions. For what size or type of actions would you want to receive notification? The Newcastle Resource Area has approximately 80 to 100 land disturbing actions per year. The majority are oil and gas wells that affect a 10 acre area. Other projects include highway improvements, gravel pits, and timber sales. Large acreage or long linear projects, such as pipelines, are rare in the Newcastle Resource Area. Additional kinds of actions include nominating sites to the National

Register of Historic Places and public interpretation of sites, such as developing brochures, videotapes, exhibits, or guided tours.

If you would like to have your concerns brought into the planning process before the draft RMP is printed, please send comments within the next 60 days. We expect the draft RMP will be ready to distribute in January 1992. You may wish to send more specific comments after receiving the draft.

If you have any questions, please call Alice Tratebas at 307-746-4453.

Sincerely,

Floyd E. Ewing
Area Manager

NEWCASTLE RESOURCE AREA

RESOURCE MANAGEMENT PLAN (RMP) UPDATE

July 9, 1993

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PROFILE

This update is being sent to inform you of where the Bureau of Land Management (BLM), Newcastle Resource Area (NRA) is at in preparing our draft resource management plan environmental impact statement (RMP EIS). The NRA is responsible for managing all public lands in Crook, Niobrara, and Weston counties as well as all public lands in Nebraska. This RMP EIS will be used to guide the management of about 291,000 acres of public lands surface and about 1.4 million acres of subsurface federal mineral estate in the Wyoming portion of the resource area. As you may recall, staff from the NRA began preparing the RMP EIS in 1989. Due to budget constraints and other statewide planning efforts, the development of the draft RMP EIS was postponed during fiscal year 1990 and resumed in fiscal year 1991.

WHAT THE RMP WILL DO

The draft EIS RMP evaluates alternative land use plans for the management of public lands and resources administered by the BLM in the Wyoming portion of the NRA. Each alternative analyzed in detail represents a complete and reasonable RMP which could be used to guide the management of about 291,000 acres of public land surface and about 1.4 million acres of subsurface federal mineral estate in the planning area. Each alternative also considers the land use plans of local and state governments and other federal agencies in and around the Newcastle Resource Area to assure that the approved RMP will be compatible with them.

WHAT THE RMP WILL NOT DO

This RMP will not include planning and management decisions for:

1. lands or minerals within the planning area that are privately owned or owned by the state of Wyoming or local governments. This amounts to approximately 2.4 million acres.
2. any coal leasing in the resource area.
3. federally owned minerals within the planning area that are under federally owned land surface administered by other federal agencies (approximately 420,233 acres in the Thunder Basin National Grasslands, Black Hills National Forest, and some lands administered by the Bureau of Reclamation).
4. BLM-administered public lands along waterways or waterway segments as wild and scenic rivers, because none met the criteria, and no recommendation for designation will be made.
5. wilderness areas because there are none in the planning area.
6. wild horse management because there are none in the planning area.

ISSUES

Based on input from BLM personnel, the public, and interagency consultation, the following planning issues were determined.

Retention or Disposal of Public Lands: Management of the scattered and isolated parcels of BLM-administered public lands in the planning area is difficult because of their small size and lack of access to many parcels.

Surface Disturbance: Surface disturbance on public land requires complex evaluation and a complex management approach. While the BLM needs to provide for the development and use of resources on the public lands (such as minerals development and livestock grazing), it also needs to provide for the protection and use of cultural resources, wildlife habitat, and other values.

Special Management Area (SMA) Designations: Some BLM-administered public lands contain hazardous substances or unique resources. These areas may warrant special management emphasis and considerations for special management designations. The BLM has identified the Lance Creek fossil area, the Stateline area, and the Whoopup Canyon petroglyph site as areas containing uncommon resources.

The Lance Creek fossil area in Niobrara County was created as a national natural landmark (NNL) in 1966 to protect significant vertebrate fossil occurrences. The National Park Service is responsible for administering and implementing the NNL program. The BLM proposes to designate Lance Creek as an area of critical environmental concern (ACEC) because fossils located there are of high scientific and educational value.

The Stateline area in Weston County (T. 43-46 N., R. 60 W.) has two areas where scenic values are high and recreational trails could be developed. The Elk Mountain Trail and the Summit Ridge Trail could be nature walk trails for use by schools, volksmarches, as well as competitive and noncompetitive events like walking, horseback riding, mountain biking, and cross-country skiing.

Whoopup Canyon petroglyph site was designated as an ACEC in 1981. The site, one of the oldest in North America, is an extensive complex of rock art panels and associated archeological deposits. It would be managed for conservation and sociocultural use. The BLM proposes to readjust the boundary and to disallow livestock, timber harvesting, and vehicle use, as well as mineral extraction. Interested public would only be allowed to view the site under BLM supervision.

WHAT'S NEXT IN THE PROCESS

The draft RMP EIS should be available to you for review in August or Early September. There will be a 90-day comment period. During this period we will schedule one or more public meetings or open houses to discuss the adequacy of the management direction presented in the RMP EIS. Written comments will be accepted until the close of the 90-day comment period.

After the close of the comment period, as part of the final RMP EIS, we will respond to all comments either by making changes in the document or by discussing the comment in a response section of the document. The final RMP EIS will then be issued for a 30-day protest period prior to issuing a decision.

Because it has been so long since we started this process, we need to update our mailing list. If you either would or would not like a copy of the draft RMP EIS, please fill out the attached form and return it to us. If we do not receive a form you will not receive a copy of the document.

TO REMAIN ON THE MAILING LIST, PLEASE FILL OUT AND RETURN TO:

USDI, Bureau of Land Management
Casper District Office
Attn: Patricia Hiller
1701 East "E" Street
Casper, WY 82601

_____ **I AM NOT** interested in receiving a copy of the Newcastle RMP EIS, but I would like to receive any future updates and notices.

_____ **I WOULD LIKE** to receive a copy of the Newcastle RMP EIS and any future updates and notices.



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Ecological Services
2617 East Lincolnway
Cheyenne, WY 82001



93 SEP 22 AM 9:57

IN REPLY REFER TO:

ES-61411
mlj/W.02(caspadc.spl)

September 20, 1993

MEMORANDUM

To: Gary Lebsack, BLM, Casper, WY

From: State Supervisor, ES, Cheyenne, WY (ES-61411)

Subject: T/E Species List for the Casper District

This responds to your request of September 10, 1993, received by this office on September 13, 1993, regarding the subject proposal.

In accordance with section 7(c) of the Endangered Species Act of 1973, as amended (ESA), my staff has determined that the following threatened or endangered (T/E) species may be present in the Casper District.

<u>SPECIES</u>	<u>STATUS</u>	<u>EXPECTED OCCURRENCE</u>
Black-footed ferret (<u>Mustela nigripes</u>)	Endangered	Potential resident in prairie dog (<u>Cynomys</u> sp.) colonies.
Bald eagle (<u>Haliaeetus leucocephalus</u>)	Endangered	Nesting. Winter resident. Migrant.
Peregrine falcon (<u>Falco peregrinus</u>)	Endangered	Migrant.

Candidate species that may occur within the Casper District are identified below.

<u>SPECIES</u>	<u>CATEGORY¹</u>	<u>EXPECTED OCCURRENCE</u>
<u>Mammals</u>		
Preble's meadow jumping mouse <u>Zapus hudsonicus preblei</u>	2	E. of Laramie Mts.
Fringed-tailed myotis <u>Myotis thysanodes pahasapensis</u>	2	E. Wyo., Black Hills
Swift fox <u>Vulpes velox</u>	2	Grasslands of SE Wyoming
Plains (Eastern) spotted skunk <u>Spilogale putorius interrupta</u>	2	E. of Bighorn and Laramie Mts.

Birds

White-faced ibis	2	Wetlands statewide
<u>Plegadis chihi</u>		
Ferruginous hawk	2	Grasslands statewide
<u>Buteo regalis</u>		
Mountain plover	1	Grasslands statewide
<u>Charadrius montanus</u>		
Long-billed curlew	3C	Grasslands/wetlands
<u>Numenius americanus</u>		
Black tern	2	Wetlands statewide
<u>Chlidonias niger</u>		
Loggerhead shrike	2	Woodlands/shrublands statewide
<u>Lanius ludovicianus</u>		

Reptiles

Black Hills redbelly snake	2	NE WY; Black Hills
<u>Storeria occipitomeoculata pahasapae</u>		

Fish

Sturgeon chub	2	Powder & Bighorn Rivers
<u>Hybopsis gelida</u>		
Plains topminnow	2	N. & S. Platte drainages and Niobrara River
<u>Fundulus sciadicus</u>		

Plants²

Slender spiderflower	2	Natrona County
<u>Cleome multicaulis</u>		
William's waferparsnip	2	Foothills of Bighorn Mts.
<u>Cymoterus williamsii</u>		
Contracted Indian ricegrass	2	Plains and hills
<u>Orysopsis contracta</u>		
Devil's Gate twinpod	2	Rocky hills and slopes in Natrona County
<u>Physaria dornii</u>		
Hapeman's sullivantia	2	Limestone outcrops
<u>Sullivantia hapemanii</u>		

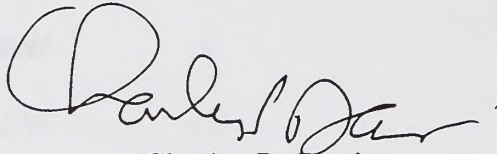
¹1 = Federal T/E listing appears appropriate and is anticipated. 2 = Current data insufficient to support listing. 3C = More widespread or abundant than previously believed, or no immediate threats identified.

² Since the distribution of plant species is continually being updated, we suggest that you contact the Wyoming Natural Diversity Database (307-776-3441) for current information.

On July 28, 1992, the Service provided a national programmatic consultation (Biological Opinion) for Animal Damage Control (ADC) activities as they relate to threatened and endangered species. We currently use the national Biological Opinion (BO) as the standard with which to evaluate proposed ADC activities on public lands in Wyoming. I have

included, for your review and use, those portions of the national BO that are pertinent to listed species in Wyoming. I recommend that you ensure all applicable sections of the national BO are incorporated into the Animal and Plant Health Inspection Service's ADC proposal. Compliance with this document will avoid jeopardy opinions when threatend and endangered species may be affected by proposed activities.

If you have any questions please contact Mike Jennings of my staff at the letterhead address or phone (307) 772-2374.

A handwritten signature in black ink, appearing to read 'Charles P. Davis', with a stylized, cursive script.

Charles P. Davis

attachment

cc: Director, WGFD, Cheyenne, WY
Nongame Coordinator, WGFD, Lander, WYPreble's shrew

Airport Master Plan Updated Improvements; Runway 8L/26R Extension, Funding, City of Phoenix, Maricopa County, AZ, Due: January 03, 1994, Contact: David B. Kessler (310) 297-1534.

EIS No. 930427, Final EIS, BLM, CA, Hollister Oil and Gas Leasing, Land and Resource Management Plan Amendment, Implementation and Applications for Permits to Drill, Bakersfield District, Monterey, San Benito, Fresno, Madera and Merced Counties, CA, Due: January 03, 1994, Contact: Robert Beehler (408) 637-8183.

EIS No. 930428, Draft EIS, BLM, WY, Newcastle Resource Management Plan, Implementation, Evaluating Alternatives for the Use of Public Lands and Resources in Portions of Wyoming, Crook, Niobrara and Weston Counties, WY, Due: March 04, 1994, Contact: Floyd Ewing (307) 746-4453.

Amended Notices

EIS No. 930394, Draft EIS, UAF, ID, Idaho Training Range, Air-to-Ground Aircraft Tactical Training Facilities within the Idaho Air National Guard at Cowen Field and the Composite Wing Mountain Home Air Force Base, ID, Due: February 09, 1994, Contact: Brenda Cook, BLM (804) 764-3328 or Butch Peugh, UAF (208) 384-3076. Published FR-11-12-93. Due Date Correction: The U.S. Department of Defense's U.S. Air Force and the U.S. Department of the Interior's Bureau of Land Management are Joint Lead Agencies for this Project.

Dated: November 30, 1993.

William D. Dickerson, Deputy Director, Office of Federal Activities, (FR Doc. 93-29615 Filed 12-2-93; 8:45 am) BILLING CODE 4840-50-U

[ER-FRL-4706-2]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared November 8, 1993 through November 12, 1993 pursuant to the ENVIRONMENTAL REVIEW PROCESS (ERP), under Section 309 of the Clean Air Act and Section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at (202) 260-5076.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated April 10, 1993 (50 FR 18392).

Draft EISs

ERP No. D-APS-G55057-NM Rating EO2, Angostura Diversity Unit Vegetative Management Plan, Implementation, Timber Harvesting and Regrowing, Carson National Forest, Camino Real Ranger District, Taos County, NM.

Summary: EPA had environmental objections to the USFS' preferred alternative and requested additional information in the final EIS regarding the selection of the preferred alternative, clarification of purpose, wetland

identification.

Battery Place to 59th Street along the western edge of Manhattan, New York Information, Funding and Approval of Permits, New York County, NY.

Summary: EPA expressed environmental concerns although the scope of the supplemental draft EIS is limited to anomalies in the traffic analysis. The final EIS needs to address water quality, hazardous wastes, air quality analysis and noise concerns raised by EPA on the draft EIS.

Final EISs

-AK, North Timber Sale Tongass

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Dept.		Phone #	
Fax #		Fax #	

water quality monitoring impact on water quality. Additional information was requested regarding maps, monitoring, air quality, threatened and endangered species.

ERP No. D-APS-L65209-WA Rating EC2, Pebble and Little Granite Timber Sales, Implementation, Mountain Analysis Area, Okanogan National Forest, Tonaasket, Twisp and Winthrop Ranger Districts, Okanogan County, WA.

Summary: EPA expressed environmental concerns regarding the sale's potential impact on water quality. Additional information was requested on air quality, threatened and endangered species, road closures, and wetlands.

ERP No. D-FAA-C51015-NJ Rating EC2, Newark International Airport Installation and Operation of an Instrument Landing System on Runway 11, Funding and Airport Layout Plan Approval, Essex and Union Counties, NJ.

Summary: EPA continued to express environmental concerns about potential impacts to capacity. Further, the document provides insufficient information to evaluate the potential need for hazardous waste disposal of material to be excavated during construction of the proposed project. Accordingly, EPA recommended that the final EIS present additional information to address these concerns.

ERP No. D-NPS-C80023-NY Rating LO1, Hamilton Grange National Memorial, General Management Plan, Implementation, New York County, NY.

Summary: EPA had no objections to the proposed project.

ERP No. DS-FHW-C40129-NY Rating EC2, NY-9A Reconstruction Project,

water quality monitoring issues will make it difficult to ensure that Alaska Water Quality Standards are met and beneficial uses protected.

ERP No. F-APS-L65197-AK, Campbell Timber Sale, Implementation, Tongass National Forest, Stikine Area, AK.

Summary: EPA had no objection to the preferred alternative as described in the final EIS.

Dated: November 30, 1993.

William D. Dickerson, Deputy Director, Office of Federal Activities, (FR Doc. 93-29616 Filed 12-2-93; 8:45 am) BILLING CODE 4840-50-U

[FRL-4806-3]

Office of Environmental Equity Grants Program; Solicitation Notice for Fiscal Year (FY) 1994 Environmental Justice Grants to Community Groups

Important Pre-Application Information

Pre-applications must be postmarked no later than February 4, 1994. Pre-applications will serve as the sole basis for evaluation and recommendation for funding. This notice contains all information and forms necessary to submit a pre-application.

Pre-applications for a Federal grant must be mailed to your Environmental Protection Agency (EPA) regional office. (A list of addresses and phone numbers for questions is included at the end of this notice.) EPA expects projects to begin by June 1, 1994. EPA will award grants in Fiscal Year 1994 subject to the amount of appropriated funds.

Bureau of Land Management
1701 East E Street
Casper, WY 82601

94-07
Dec. 22, 1993
Contact: Floyd Ewing
307-746-4453

BLM NEWS

Newcastle draft Resource Management Plan Released

The Bureau of Land Management is accepting public comments on its recently released draft Newcastle Resource Management Environmental Impact Statement for Public Lands in the Newcastle Resource Area. The deadline for comments is March 4, 1994.

An open house is scheduled at the Newcastle Resource Area office at 1101 Washington Blvd. in Newcastle from 8:30 AM to 4:30 PM on January 26, 1993. A public meeting is scheduled at 7:00 PM that day at the same address. The open house and public meeting is to discuss the adequacy of the management directions presented in the draft RMP.

Comments will be considered before the final RMP is released and prior to issuing a decision. Comments and/or questions may be addressed to Floyd Ewing, Area Manager at the Newcastle address or comments will also be accepted by telephone at (307) 746-4453 to either Floyd Ewing or Gary Lebsack, RMP Team Leader. Copies of the draft document are available at either the Newcastle office or the Casper District Office.

The draft Newcastle RMP considers four alternatives for the management of about 291,000 acres of public surface and about 1.4 million acres of public subsurface mineral estate in Crook, Weston and Niobrara counties. Public lands and resources in Nebraska are also administered by the Newcastle office, however a separate management plan has been developed for these lands. The preferred alternative increases the management emphasis on recreation, and calls for categorizing specific uses for cultural resources such as conservation for future use, public use, scientific use and others. Oil and gas leasing, grazing and timber harvest will remain at nearly current levels. The other alternatives analyzed are the no action alternative and two separate combinations of different management practices.

Three new proposals under the preferred alternative are the establishment of a Special Recreation Management Area (SRMA) east of Newcastle along the state line where hiking, mountain biking and snowmobile trails would be developed. The plan calls for special emphasis on research, education and scientific uses for the Whoop-up Canyon Area of Critical Environmental Concern (ACEC) and also a boundary adjustment. The Lance Creek Fossil Area in Niobrara County would become a new ACEC.

BUREAU OF LAND MANAGEMENT
NEWCASTLE RESOURCE AREA
110 Washington Boulevard
Newcastle, WY 82701
(307) 746-4453

NEWCASTLE RESOURCE MANAGEMENT PLAN UPDATE

April 1995

Dear Friends of BLM:

I wanted to contact each of you who have been involved in our planning effort for the Newcastle Resource Management Plan (RMP). I'd like to tell you about the comments received on the Draft Environmental Impact Statement (EIS), changes to the preferred alternative in the Draft EIS we are considering for the final EIS, and where we will go from here.

The response we've had on the Draft EIS has been tremendous. On behalf of our entire planning team, I would especially like to thank the county commissioners of the three-county area, the Niobrara Resource Council, the Sierra Club, and everyone else who gave us comments, expressed concerns, and worked together with us to bring this document to a Final EIS. I also appreciate any additional information you supplied about the Newcastle Resource Area (NRA).

We are in the process of completing the Final EIS. This has been a very complex process, but it is also a very necessary one in order to ensure your comments and concerns were addressed. Our responses to your comments will be published in the Final EIS.

The following, based on your comments, is what we felt were the major concerns you identified.

YOUR CONCERNS, OUR RESPONSES

Concern: Paleontology and the proposal to designate the Lance Creek fossil area as an area of critical environmental concern (ACEC).

Response: An ACEC designation for the Lance Creek area was proposed early in the planning effort for the Newcastle RMP. The Draft EIS was not clear in presenting the fact that the proposed ACEC designation applies only to the BLM-administered public land surface within the Lance Creek fossil area. It would not apply to any other lands in the area that are owned and administered by private parties or by local or state governments. Map 3-1 in the Draft EIS did not differentiate between BLM-administered public land surface and any other land surface ownership; thus, it appeared that the ACEC designation would be applied to all lands in the identified area regardless of ownership. That map (3-1) and the paleontological resource management provisions in the preferred alternative of the Draft EIS also leads one to believe that the proposed ACEC is the only place in the NRA containing fossils or significant fossils where conditional or mitigation requirements for paleontological resources need to be applied.

Both of these misleading aspects resulted in many public comments on the proposed ACEC. In considering these comments, we have re-evaluated and decided to reject the proposed ACEC designation. A more practical and comprehensive option for dealing with fossil management on the BLM-administered public lands will be included in the final EIS.



While some fossils from the Lance Creek area are significant, they are no more significant or unique when compared to others found elsewhere in the resource area. Over much of the resource area spectacular marine reptile and fish fossils are found in older rocks; skeletons of early mammals occur in younger rocks. There is little evidence that noteworthy fossils have been, or are likely to be, found on the BLM-administered public lands compared to other lands in either the Lance Creek area or elsewhere in the resource area. Therefore, it would be impractical to place an ACEC designation on a few BLM-administered public land parcels in the Lance Creek area or on all the BLM-administered public land parcels scattered over the resource area. Instead, we will simply continue to carry out existing policy for managing significant fossils wherever they occur on BLM-administered public lands. This policy includes requirements for reviewing scientific literature, surveying some areas for fossils if surface disturbance is expected, and making provisions for mitigating or preventing fossil damage. This policy applies to any existing or future action on BLM-administered public surface. It also applies to any BLM authorizations that may be issued for actions related to mineral sales and leases or to federally owned locatable minerals activities. This policy will continue to apply in split estate areas where the BLM administers the federal mineral estate under land surface that is owned and administered by private parties or by local and state governments. In these split-estate areas, the policy would be applicable to the BLM-authorized federal actions or authorizations related to exploring and developing the federal minerals to mitigate, avoid, or prevent damage to the fossils which are owned by the land surface owner (see the following concern on split estate). Several consulting firms have paleontologists available to do this work during the environmental analysis process. Also, future federal mineral leases issued in the Newcastle Resource Area will include a notice informing the lessee of the BLM's policy and the actions that may be required. Thoughtful application of existing management techniques, along with the lease notice, can be expected to provide a more consistent, overall treatment of fossil resources than that presented

in the Draft EIS.

In 1986, the Office of the Solicitor suggested that fossil collecting on BLM-administered public surface be managed under the Federal Land Policy and Management Act (FLPMA); before that, fossil collecting was managed under the Antiquities Act of 1906. It has been BLM policy for many years to allow hobby collecting of petrified wood and common invertebrate fossils on the BLM-administered public lands without a permit. However, commercial collection of fossils is not allowed on BLM-administered public surface. The BLM requires a permit in order to collect vertebrate fossils because we consider them nonrenewable and scientifically significant.



On BLM-administered public surface vertebrate fossils may be collected only by qualified paleontologists who obtain permits from the BLM and who agree to deposit all specimens in a public institution where they remain the property of the American people. BLM encourages the permitted collection of vertebrate fossils on the public lands, along with scientific data that greatly increase the research value of specimens. Several paleontological resources use permits have been issued for BLM-administered public lands in the Lance Creek fossil area in recent years.

BLM recently hired a paleontologist whose responsibilities are in Wyoming and the surrounding region. This specialist is available to supply expertise and to help make decisions about fossil resources, and is encouraging other paleontologists to focus their research and collecting activities on the BLM-administered public lands.

The preferred alternative in the Draft EIS proposed that interpretive signs and displays about fossils be placed on BLM-administered public lands in the Lance Creek fossil area. Many public comments argued that signs could invite damage to or theft

of fossils, unwanted and uncontrolled entry onto private lands, damage to private property, and inconvenience for landowners. For these reasons, signs will not be included in the provisions for fossil resource management on BLM-administered public lands in the Lance Creek fossil area. However, in the future signs or exhibits about paleontological resources may be developed and used for informational or educational purposes. Individuals who want to collect fossils on private or state land must get permission from the landowner and are responsible for knowing the land status of areas where they collect. BLM-administered public land boundaries are marked in places where public access routes cross them, but providing boundary signs for all areas of public land would be too expensive and impractical.

The sections on Paleontology in the Draft EIS have been revised to help the reader understand the significance of paleontological resources in the Newcastle Resource Area.

Concern: BLM's responsibilities and authorities on split-estate lands.

Response: By the late 1800s, much of the public domain lands (federal lands) had been transferred to private ownership either by sale or homesteading. The annual report for 1882 from the US General Land Office pointed out that companies had fraudulently acquired great quantities of valuable public coal lands and other public lands. In response to this and subsequent investigations, President Theodore Roosevelt withdrew in 1906 more than 66 million acres of public coal lands from settlement and location. Congress questioned whether or not the President had authority to do this. In 1910, Congress passed the General Withdrawal or Pickett Act, giving the President power to "temporarily" withdraw public lands from settlement and location for public purposes.

In response to the uproar that this created with politicians, business people, and homesteaders President Roosevelt signed the Act of March 3, 1909, which allowed homesteaders who had settled public coal lands to patent those lands as

long as the coal was reserved to the United States. The act of June 22, 1910 permitted homesteaders to file for public coal lands as long as the coal was reserved to the United States.

The policy of reserving mineral rights was extended to public petroleum lands in 1909 by President Taft. Two years later, during Woodrow Wilson's administration, the policy was extended to all public lands. The list of minerals that could be reserved was enlarged to include phosphate, nitrate, potash, and asphaltic minerals. Finally, the Stockraising Homestead Act of 1916 reserved all minerals to the United States. This is how "split-estate" lands (areas where the land surface and minerals are owned by different entities) came about in northeast Wyoming.

As part of the mineral policies initiated during his Presidency, Roosevelt had advocated a leasing policy for coal and petroleum lands, but Congress resisted the idea. In 1917, potassium deposits could be leased because potassium was essential to America's production of military explosives during World War I. This prompted the policy to extend leasing to coal, petroleum, natural gas, sodium, phosphate, and oil shale in 1920. Under the Mineral Leasing Act of 1920 individuals and companies could prospect for and develop the minerals listed.

There are two general categories of split estate lands. One category is those lands where the land surface is federally-owned and administered by the BLM, while some or all of the minerals under them are owned and administered by either private parties or by local or state governments. The other category is those lands where the land surface is owned and administered by private parties or by local or state governments, and some or all of the minerals under them are federally owned and administered by the BLM. "Some or all of the minerals" means there may also be more than one owner among the different types of mineral estates. For example, in some lands, the federal government may own only the oil and gas or only the coal, or both, while the other mineral resources in those same lands (locatable, saleable,

and other leasable minerals) are owned by the state or by private parties.

In either category, the mineral owners are entitled access to their minerals to explore for and develop them and to prudently use an area of the land surface and surface resources that are directly necessary to those exploration and development activities. Mineral owners are required to compensate for damage to surface owner improvements, to avoid or mitigate other affects of their activities, and to reclaim the surface. A new appendix containing more detail on split estate lands will be printed in the final EIS.

From many of the public comments on the draft EIS there appears to be a misunderstanding about the BLM's responsibilities and authorities related to split-estate lands. Maybe we can clarify these things.

The **BLM DOES NOT** have any jurisdiction or statutory authority to make land use planning or resource management decisions for the use of any land surface that is owned by private parties or by local or state governments.

It was not intended for the preferred alternative in the draft document to suggest that the BLM can direct or dictate how private landowners or state and local governments manage their own lands. The BLM has no authority to do that.

It is also important to understand that the BLM **DOES** have the authority **AND THE RESPONSIBILITY** to plan for and manage the federal mineral estate under these split estate lands. Planning and management of the federal mineral estate includes:

- making planning and management decisions that salable and leasable federal minerals will or will not be sold or leased, and implementing those decisions;
- deciding whether or not mining claims may be filed for locatable federal minerals and implementing those decisions; and,

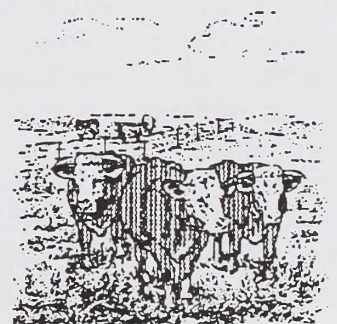
- deciding any required conditional provisions, mitigation measures, and land surface reclamation requirements that would be included in any federal minerals sales or leases (to include use authorizations) that the BLM may issue, related to exploration and development of the federal minerals in these lands, and implementing those decisions.

Such conditions, mitigation measures, and reclamation requirements are **NOT** requirements that the BLM places upon the land surface or the surface owners. Rather, these are requirements attached to any use authorizations the BLM would issue that are related to the exploration and development of the federal minerals.

These requirements are a result of both federal and state laws enacted in the interest of protecting the general environment, regardless of who owns the land surface. They also protect rights and properties of the surface owners from unnecessary and undue degradation and damage that may be caused by any activities related to "federal actions" that the BLM would take or authorize, such as selling, leasing, exploring for and developing the federal minerals. The BLM prefers to work with both the developers of the federal minerals and the surface landowners in reaching mutually acceptable surface disturbance conditions, mitigations, and reclamation requirements.

Concern: The interpretation that livestock grazing is a surface disturbance.

Response: The following should help clarify various interpretations of the narrative under *Issue B* on page 6 of the Draft EIS relating to surface-disturbing activities. BLM is responsible for administering surface-disturbing activities only on BLM-administered public land surface and for adminis-



tering exploration and development activities related to federally owned minerals where they result in surface disturbance on split-estate lands. The use of vegetation by livestock and other grazing animals is not a surface-disturbing activity. We define surface-disturbing activities as those that result in the physical disturbance and movement or removal of the land surface, soil, and vegetation associated with such things as excavation and development activities with heavy equipment (for example, blasting, strip and pit mining, and roads).

Concern: The proposal not to control prairie dogs on BLM-administered public lands.

Response: Prairie dog management has been a BLM concern in northeast Wyoming since the Newcastle Resource Area was established in 1977. The proposal in the preferred alternative of the Draft EIS was to not allow prairie dog control on public land administered by the BLM in the Wyoming portion of the NRA unless they are causing resource damage or they become a hazard to human health and safety.

Resource damage would be documented by BLM personnel from the resource area office and the grazing lessee, adjacent landowners, or other interests. This could include resource damage occurring on private or state lands from prairie dog towns located on BLM-administered public lands.

Human health and safety determinations would be made by the State of Wyoming Department of Health or by officers of the US Centers for Disease Control.

Unless one of the above situations were occurring, prairie dog control on BLM-administered public land in the resource area would not be allowed. Prairie dogs and their towns are an important component of the prairie ecosystem and are valuable in providing habitat and a food source for a number of wildlife species, many of which are species of special management concern. For these reasons and because the number of prairie

dog towns and the acreage they affect on BLM-administered public land are small, the above proposal was made.

Concern: That the proposal to establish the Stateline Special Recreation Management Area (SRMA), while still allowing other uses of the area, will work against all interests and uses in the area.



Response: This proposal is in recognition of the recreational opportunities the proposed SRMA affords and the increasing demand for outdoor recreation areas and activities on BLM-administered public land in the resource area. While other uses would not be precluded in the SRMA, it would be required that all uses or activities (including recreational uses and activities) that do take place are conducted or designed so that they do not detract from the recreational uses or values of the area.

Concern: Whether or not access to BLM-administered public lands in the resource area is lacking and whether or not increased access to public land will adversely affect private lands and private landowners.

Response: The Draft EIS identified the need for more access to BLM-administered public lands but does not propose obtaining access to each parcel of public land in the resource area. Only necessary access for managing the public lands is intended. This may be provided through land exchanges, easements, or other means. Condemnation of private lands for access routes is not an option and is not proposed or promoted.

Concern: Whether or not the BLM-administered public lands in the resource area need more identifying signs.

Response: BLM-administered public land boundaries are marked where access routes cross property lines or where problems have occurred. This will continue to be done on a case-by-case basis as problems are identified and as funding allows.

Concern: Public land sales and exchanges are too time-consuming and costly.

Response: This was an concern identified during scoping at the start of this planning effort. There are about 297,000 acres of BLM-administered public land in the resource area consisting of mostly small parcels scattered over a three-county area. Many opportunities exist to improve our management capability by selling or exchanging public land parcels that are difficult or impossible to manage. Exchanges are the preferred method and are used to block-up public lands into larger units that would be more manageable.

Some comments were received identifying the length of time required to complete a public land sale or exchange. While we agree, we confess that the legal and procedural requirements as well as the time involved to complete land actions makes it difficult to speed up the process.

Briefly, the following steps must be taken to complete a land exchange or sale:

1. Determine if the proposal is in conformance with land use planning, review land status to determine if the lands are subject to application, and determine if the application meets all requirements of the law and regulations.
2. Secure views of other agencies that may have an interest in the lands, including state and local planning and zoning departments.
3. Check for unpatented mining claims, and if necessary, complete a validity exam on them.
4. Complete an appraisal of the subject lands.
5. Conduct a field examination and other investi-

gations to gather information and data on the environmental considerations and proper classification of the lands.

6. Complete an environmental assessment and publish a notice to solicit views and comments from the public concerning the proposal. Also, assure that the action is in conformance with applicable laws.

Based on the above review and evaluation, BLM officials may approve or disapprove the action.

Concern: Whether or not federal oil and gas leasing should be more restrictive.

Response: The BLM does not close areas of federally owned oil and gas (whether or not on split estate lands) to leasing or development unless evidence indicates that development would be incompatible with other valuable resource or land uses and the conflict cannot be mitigated. Federal oil and gas leases include necessary stipulations. Exploration and development activities are also conditioned with mitigation measures and other necessary requirements to protect soil, water, air, special management areas, sensitive resources, steep slopes, critical wildlife habitat, riparian areas, and other important land and resource values.

None of the alternatives in the Draft EIS propose that stipulations or mitigation requirements on federal oil and gas leasing and development activities be lessened. Two alternatives in the Draft EIS, including the preferred alternative, propose more of such requirements or more stringent requirements than the other alternatives. Unless there is information to indicate that these requirements are not adequate there appears to be no reason to require even more stringent measures or to prohibit oil and gas leasing and development.

In the resource area, surface disturbance related to oil and gas exploration and development is declining. This is because more wells are being plugged and abandoned and the location reclaimed than there are new wells being drilled.

Concern: Whether or not policy changes in the wild and scenic rivers review process will change the outcome of the review.



Response: When the wild and scenic rivers review was conducted for the Draft EIS, the BLM's Wild and Scenic Rivers Manual included an additional eligibility criterion--"Jurisdictional Considerations." This criterion provided that, where the BLM-administered public land surface represents less than 40% of the shoreline in a waterway or waterway segment being reviewed, that public land surface involved will be considered to be ineligible for further consideration. As a result, all 19 parcels of BLM-administered public lands that contained outstandingly remarkable values were ineligible for further consideration in the process. The jurisdictional eligibility criterion was rescinded in December 1993 because jurisdictional considerations are factors of suitability rather than eligibility criteria and should be addressed in the suitability determination phase of the review process. The same 19 parcels of BLM-administered public lands located along 8 waterways in the resource area were found to meet the eligibility criteria. However, during the suitability review, we determined that none of the BLM lands involved met the suitability factors and will not be considered for inclusion in the wild and scenic rivers system. Thus, the policy change did not result in any change in the final outcome of the wild and scenic rivers review. The detailed documentation of the review will be updated and included as an appendix in the Final EIS.

Some of the comments received questioned why some of the waterway review segments were referred to as "stream" rather than by name. This is because many lower order waterways are not named on US Geological Survey topographic maps, which were used for the review. Locations

of all the waterway review segments are on file in the Newcastle Resource Area Office.

Concern: Threatened and Endangered (T&E) or Sensitive Species

Response: Sixty six (66) vegetation species that occur on BLM-administered public lands in the Newcastle Resource Area have been included on a list of plants that are of special concern. Eleven (11) of these plants have been proposed for designation as "sensitive" plant species. These 11 species have been proposed for this designation based on research information, compiled through BLM inventory contracts, to obtain information on the occurrence of T&E or "candidate" plant and animal species and species of special concern in the resource area.

Candidate species are those plants or animals that are designated as candidates for listing as T&E species under the Endangered Species Act. Sensitive species are defined as those plants and animals that could easily become endangered or extinct in a state. Upon designation by the BLM State Director, sensitive species are given similar management attention as is given to candidate species.

Management on BLM-administered public lands must be consistent with the principles of multiple use. Therefore, where these sensitive species occur on public land, BLM will strive to use conservation practices to keep them and their habitats from decreasing and to keep them from being designated as candidate or T&E species. Where these same species occur on split estate lands (private surface/federal mineral), conditioning of the exploration and development of the federally owned minerals and related activities that the BLM would authorize would be handled in the same manner, to the extent possible.

The goal of this approach is to try to sufficiently protect these sensitive species so that it will be unnecessary for them to be listed as either candidate species or as T&E species. As you may be aware, when plant or animal species are listed as

T&E, they become more universally protected, by law, on most lands (animals on all lands and plants on federally managed lands). We believe it would be of mutual benefit to all parties within the Newcastle Resource Area if this could be avoided.

WHAT'S NEW IN THE FINAL DOCUMENT

The Final EIS will be a summary document that includes the proposed Newcastle RMP. It will also include your comments on the Draft EIS, and our responses to them. The preferred alternative that was presented in the Draft EIS will be modified to develop the proposed RMP. The modifications will result from your comments, incorporation of new information, and corrections of errors. The Final EIS will include:

A Glossary to help you better understand some of the more confusing terms we use.

The **"Land and Mineral Ownership"** table (1-1) has not been revised but will be included in the final EIS.

The **"Paleontology"** and **"Socioeconomics"** sections of chapter 3 in the Draft EIS ("The Affected Environment") will be rewritten. The paleontology section will discuss fossils throughout the NRA and the history of paleontological research in this area. The socioeconomics section will clarify information presented in the Draft EIS and will make better comparisons between among economic sectors.

The **"Proposed Newcastle RMP"** section in chapter 4 (Environmental Consequences) of the Draft EIS will be included in its entirety. This will essentially be developed through major rewrites (paleontology and socioeconomics) and corrections or additions to the environmental consequences of the preferred alternative from the Draft EIS.

An appendix discussing split estate is being included in the Final EIS to present information on how split estate came to be as well as the limitations of our management responsibilities and authorities on split estate lands.

The updated Wild and Scenic Rivers appendix (C in the Draft EIS) will be included in the Final EIS.

From the Draft EIS, the **"General Location"** map (1-1), the **"Areas of Natural or Historic Interest"** map (3-1), the **"Recreation Development and Exchange of Use Areas"** map (3-13), the **"Visual Resource Management"** map (3-14) have all been revised and clarified and will be included in the Final EIS.

The **"Surface Ownership"** map has not been revised but will be included in the Final EIS.

RMP OPEN HOUSES

April 25, from 9:30 a.m. to 8:00 p.m. at the Newcastle Resource Area office.

/s/ Floyd Ewing
Newcastle Resource Area Manager



DATES: January 19, 1994, through January 23, 1994.

SUPPLEMENTARY INFORMATION: Specific restrictions and closure periods are as follows:

Designated Course

1. The portion of the course comprised of Bureau of Land Management lands, roads, and ways is south of the Bill Williams River, East and north of Highway 72 and west of Wenden Road is closed to public vehicle use from 6 p.m. Wednesday, January 19, 1994, to 12 p.m. (noon) Sunday, January 23, 1994 (Mountain Standard Time).

2. Vehicles are prohibited from the following four Wilderness Areas and one Wilderness Study Area (WSA):

- a. AZ-050-12 (Gibraltar Mountain).
- b. AZ-050-15A (Swansea).
- c. AZ-050-71 (Buckskin Mountains).
- d. AZ-050-14A/B (Cactus Plain).
- e. AZ-050-17 (East Cactus Plain, WSA).

3. The entire area encompassed by the designated Course and all areas within 1 mile outside the designated Course are closed to all vehicles except authorized and emergency vehicles. Access routes leading to the course are closed to vehicles. All closed routes will be posted throughout the closure period.

4. Vehicle parking or stopping along Bouse Road, Shea Road, and Swansea Road is prohibited except for the designated spectator areas.

5. Spectator viewing is limited to two designated spectator areas located at:

- a. South of Shea Road, approximately 6 miles east of Parker, Arizona.
- b. Bouse Road, also known as Swansea Road (about 1½ miles north of Bouse, Arizona).

6. The following regulations will be in effect for the duration of the closure. Unless otherwise authorized, no person shall:

- a. Camp in any area outside of the designated spectator areas.
- b. Enter any portion of the race course or any wash located within the race course, including all portions of Osborne Wash.
- c. Spectate or otherwise be located outside of the designated spectator areas.
- d. Cut or collect firewood of any kind, including dead and down wood or other vegetative material.
- e. Be in possession of any alcoholic beverage unless that person has reached the age of 21 years.
- f. Possess, discharge, or use firearms, other weapons, or fireworks.
- g. Park, stop, or stand any vehicle outside of the designated spectator areas.

h. Operate any vehicle, including an off-highway vehicle, which is not legally registered for street and highway operation, including operation of such a vehicle in spectator viewing areas, along the race course, and in designated pit areas.

i. Park any vehicle in violation of posted restrictions, or in such a manner as to obstruct or impede normal or emergency traffic movement or the parking of other vehicles, create a safety hazard, or endanger any person, property, or feature. Vehicles so parked are subject to removal and impoundment at the owner's expense.

j. Take any vehicle through, around, or beyond a restrictive sign, recognizable barricade, fence, or traffic control barrier.

k. Fail to keep their site free of trash and litter during the period of occupancy or fail to remove all personal equipment, trash, and litter upon departure.

l. Violate quiet hours by causing an unreasonable noise as determined by the authorized officer between the hours of 10 p.m. and 6 a.m. Arizona time (Mountain Standard Time).

m. Allow any pet or other animal in their care to be unrestrained at any time.

Signs and maps directing the public to the designated spectator areas will be provided by the Bureau of Land Management and the event sponsor.

Signs and maps directing the public to the designated spectator areas will be provided by the Bureau of Land Management and the event sponsor.

The above restrictions do not apply to emergency vehicles and vehicles owned by the United States, the State of Arizona, or to La Paz County. Vehicles under permit for operation by event participants must follow the race permit stipulations. Operators of permitted vehicles shall maintain a maximum speed limit of 35 mph on all La Paz County and Bureau of Land Management administered roads and ways. Authority for closure of public lands is found in 43 CFR 8340, subpart 8341, 43 CFR 8360, subpart 8364.1, and 43 CFR 8370, subpart 8372. Persons who violate this closure order are subject to arrest and, upon conviction, may be fined not more than \$100,000 and/or imprisoned for not more than 12 months.

FOR FURTHER INFORMATION CONTACT: Bureau of Land Management Law Enforcement Ranger Mark Harris or Outdoor Recreation Planner Myron McCoy, Havasu Resource Area Office, 3189 Sweetwater Avenue, Lake Havasu City, Arizona 86406, telephone (602) 835-8017

Dated: December 17, 1993.

Michael A. Taylor,

Associate District Manager.

[FR Doc. 93-31583 Filed 12-27-93; 8:45 am]

BILLING CODE 4310-32-M

[CA-068-04-4950-10-4503]

Emergency Closure of Public Lands; California; Correction

AGENCY: Bureau of Land Management, Department of the Interior.

ACTION: Correction to an emergency closure of certain public lands to motorized vehicle use in the Juniper Flats Area of San Bernardino County, California for a period of two years.

Correction

In notice document 93-22712 beginning on page 48667 in the issue of Friday, September 17, 1993, make the following correction:

Insert an additional paragraph in the third column below paragraph (9), describing roads to be exempted from the closure, to read:

(10) Moss Hill Road, south of Moss Hill to Forest Service Road 3N59A, east of Bowen Ranch through public lands only in Sections 11 and 12 of T. 3 N., R. 3 W.

Dated: December 8, 1993.

Karla K.H. Swanson,

Area Manager

[FR Doc. 93-31433 Filed 12-27-93; 8:45 am]

BILLING CODE 4310-40-M

[WY-060-03-4410-02]

Draft Environmental Impact Statement for Newcastle Resource Area, WY

AGENCY: Bureau of Land Management, Interior, Newcastle Resource Area Casper District, Wyoming.

ACTION: Notice of availability of the draft environmental impact statement for the Newcastle Resource Management Plan, for public review and comment.

SUMMARY: The draft environmental impact statement (ESI) for the Newcastle Resource Management Plan (RMP) describes and analyzes four alternative resource management plans (RMPs), including the BLM's preferred alternative, for managing the Wyoming portion of the Newcastle Resource Area. The planning area is located in Crook, Weston and Niobrara Counties, in northeastern Wyoming. When completed, the Newcastle RMP will provide the management direction for future land and resource management actions on approximately 291,000 acres

of public land surface and approximately 1,700,000 acres of Federal mineral estate administered by the BLM within this portion of the Newcastle Resource Area.

The draft EIS focuses on resolving three key issues that were identified with public involvement early in the planning process. These issues are: (1) Retention or disposal of public lands; (2) surface disturbance; and (3) special management area designations.

There is one designated area of environmental concern (ACEC) within the Newcastle RMP planning area, the Whoopup Canyon ACEC designation be retained and that the area of the ACEC be expanded in size. While the potential for new ACEC designation was explored, none were identified and none are proposed in the preferred alternative.

During development of the draft EIS, the BLM conducted a Wild and Scenic Rivers review of BLM administered public lands that lie along waterways within the planning area. There were no BLM administered public lands in the planning area that were found to meet the Wild and Scenic Rivers eligibility criteria to be given further consideration for inclusion in the Wild and Scenic Rivers System.

The coal screening process (including application of the coal unsuitability criteria under 43 CFR part 3461) was not conducted for the planning effort. Any interest in coal exploration or leasing will be handled on a case-by-case basis. If an application for a coal lease is received sometime in the future, an appropriate land use environmental analysis will be conducted (which will include conducting the coal screening process), to determine whether or not the coal areas applied for are acceptable for development and leasing consideration. The RMP will be amended as necessary. To date, there has been no interest expressed to the BLM for leasing and development of BLM-administered coal in the planning area.

Wilderness management and wild horse management were not addressed in the planning effort. There are no wilderness areas or wilderness study areas on BLM-administered public lands in the planning area. In addition, there have been no other areas with wilderness characteristics identified on public lands in the planning area. There are no known wild horses or wild horse herd management areas in the planning area.

DATES: Written comments will be accepted for 90 days following the date the Environmental Protection Agency

(EPA) publishes the filing of the Newcastle RMP draft EIS in the Federal Register. This EPA notice was published on December 3, 1993. A public meeting, open house, or both will be held during the 90-day comment period. Notices of these public involvement activities will be sent to all those on the Newcastle RMP mailing list.

ADDRESSES: Copies of the draft EIS for the Newcastle RMP are available from the BLM Newcastle Resource Area Office at 1101 Washington Boulevard, Newcastle, Wyoming 82701, or the BLM Casper District Office at 1701 East "E" Street, Casper, Wyoming 82601. Comments, and requests to be placed on the Newcastle RMP mailing list, should be sent to the Newcastle Area Manager at the Newcastle Resource Area Office.

FOR FURTHER INFORMATION CONTACT: Floyd Ewing, Newcastle Area Manager, or Gary Lebsack, Newcastle RMP Team Leader, at the above address or by telephone (307) 748-4453.

SUPPLEMENTARY INFORMATION: The Newcastle Resource Area is responsible for managing the BLM administered public lands in Crook, Niobrara, and Weston counties in Wyoming, and all BLM administered public lands in Nebraska. Management of the BLM administered public lands in Nebraska is covered under the Nebraska Resource Management Plan complete in 1992.

Within the Newcastle RMP planning area, there are varied and intermingled land surface ownerships and overlapping mineral ownerships. Therefore, the administrative jurisdictions for land use planning and for managing the land surface and minerals are also varied, intermingled, and sometimes overlapping. For this reason, it is important to understand that the Newcastle RMP draft EIS does not address management of lands or minerals within the planning area that are privately owned or owned by the State of Wyoming or local governments (about 1,000 acres). It also does not address those federally owned minerals within the planning area that are under federal land surface managed by other federal agencies (about 420,000 acres).

The draft EIS for the Newcastle RMP presents for alternative, multiple use resource management plans for managing the BLM administered public lands in the planning area, Alternative A (continuation of present management) and three other alternatives that suggest different combinations and emphases for managing the various resource and land uses on the BLM administered public lands, on the basis of needs, opportunities, and public demand. The

four alternative plans focus on allocating public lands and resources among their valid uses and prescribing general management actions that would be taken. The Preferred Alternative is a combination of parts of alternatives, A, B, and C and represents what BLM believes is the best balance between the public land and resource uses and environmental protection in the planning area. The various impacts that would be expected from implementing each of the alternatives is also presented in the draft EIS.

Dated: December 13, 1993.

Ray Brubaker,
State Director.

[FR Doc. 93-31647 Filed 12-27-93; 8:45 am]
BILLING CODE 4010-22-M

[AZ-040-5410-10-A111; AZ 28181]

Receipt of Application for the Conveyance of Federally-Owned Mineral Interests

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: Notice is hereby given that pursuant to Section 209 of the Act of October 21, 1976, 90 Stat. 2757, Reyben L. Lebrecht, Trustee, Pima County, Tucson, Arizona, has applied to purchase the mineral estate described as follows:

Gila and Salt River Meridian, Arizona
T. 18 S., R. 15 E.,
Sec. 10, lots 3 and 4, N $\frac{1}{2}$ SW $\frac{1}{4}$;
Sec. 15, lots 3 and 4, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$.
Containing 471.54 acres.

Upon publication of this notice in the Federal Register, the mineral interests described above will be segregated to the extent that they will not be open to appropriation under the public land laws including the mining laws. The segregative effect of the application shall terminate either upon issuance of a patent or other document of conveyance of such mineral interests, upon final rejection of the application or two years from the date of filing of the application, September 24, 1993, whichever occurs first.

FOR FURTHER INFORMATION CONTACT: Additional information concerning this application may be obtained from the Realty Specialist at the Tucson Resource Area Office, 12661 East Broadway, Tucson, Arizona 85748.

Dated: December 14, 1993.

Frank L. Rowley,
Acting District Manager.

[FR Doc. 93-31532 Filed 12-27-93; 8:45 am]
BILLING CODE 4301-22-M

Bureau of Land Management
1701 East E Street
Casper, WY 82601

94-12
Jan. 19, 1994
Contact: Floyd Ewing
307-746-4453

BLM NEWS

Newcastle Open House and Public Meeting

The Bureau of Land Management is hosting an open house January 26, 1994 from 8:30 AM to 4:30 PM at the Newcastle Resource Area office at 1101 Washington Blvd. in Newcastle. The Area Manager and his staff will be available throughout the day to answer questions and discuss the adequacy of the management direction presented in the recently released draft Newcastle Resource Management Environmental Impact Statement for Public Lands in the Newcastle Resource Area. Mr. Donald L. Hinrichsen the new Casper District Manager will be joining the Open House at 3:00 PM. A public meeting is scheduled at 7:00 PM at the same address that day to discuss the draft RMP.

The Bureau of Land Management is accepting public comment on the draft RMP until March 4, 1994. Comments will be considered before the final RMP is released and prior to issuing a decision. Comments and/or questions may be addressed to Floyd Ewing, Area Manager at the Newcastle address or comments will also be accepted by telephone at (307) 746-4453 to either Floyd Ewing or Gary Lebsack, RMP Team Leader. Copies of the draft document are available at either the Newcastle office or the Casper District Office.

-END-

Bureau of Land Management
1701 East E Street
Casper, WY 82601

BUREAU OF LAND MANAGEMENT
NEWCASTLE RESOURCE AREA

94 FEB -4 AM 10:59

94-13

Feb. 2, 1994

Contact: Kate Padilla
307-261-7600

BLM NEWS

BLM Schedules Public Meeting At Lance Creek

The Bureau of Land Management is holding a public meeting 7:00 P.M. February 24, at the Lance Creek Elementary School to discuss the draft Newcastle Resource Area Resource Management Plan (RMP). The Bureau of Land Management is accepting public comment on the draft RMP until March 4. Comments will be considered before the final RMP is released and prior to issuing a decision.

The draft Newcastle RMP considers four alternatives for the management of about 291,000 acres of public surface and about 1.4 million acres of public subsurface mineral estate in Crook, Weston and Niobrara counties. Public lands and resources in Nebraska are also administered by the Newcastle office, however a separate management plan has been developed for these lands. The preferred alternative increases the management emphasis on recreation, and calls for categorizing specific uses for cultural resources such as conservation for future use, public use, scientific use and others. Oil and gas leasing, grazing and timber harvest will remain at nearly current levels. The other alternatives analyzed are the no action alternative and two separate combinations of different management practices.

Three new proposals under the preferred alternative are the establishment of a Special Recreation Management Area (SRMA) east of Newcastle along the state line where hiking, mountain biking and snowmobile trails would be developed. The plan calls for special emphasis on research, education and scientific uses for the Whoop-up Canyon Area of Critical Environmental Concern (ACEC) and also a boundary adjustment. The Lance Creek Fossil Area in Niobrara County would become a new ACEC. Once an ACEC is designated in an RMP special emphasis is placed on developing a management plan for those particular resources. Public involvement is also used during this process.

Comments and/or questions may be addressed to Floyd Ewing, Area Manager at the Newcastle address or comments will also be accepted by telephone at (307) 746-4453 to either Floyd Ewing or Gary Lebsack, RMP Team Leader. Copies of the draft document are available at either the Newcastle office or the Casper District Office.

- END -

Bureau of Land Management
1701 East E Street
Casper, WY 82601

94-17
Feb. 28, 1994
Contact: Kate Padilla
307-261-7600

BLM NEWS

BLM Reschedules Public Meeting

The Bureau of Land Management has rescheduled the Lance Creek public meeting to discuss the draft Newcastle Resource Area Resource Management Plan (RMP). The meeting will be held, tomorrow, March 1st, 6:00 P.M. at the Lusk Fairground building.

The Bureau of Land Management is accepting public comment on the draft RMP until March 4. Comments will be considered before the final RMP is released and prior to issuing a decision.

Comments and/or questions may be addressed to Floyd Ewing, Area Manager at the Newcastle address or comments will also be accepted by telephone at (307) 746-4453 to either Floyd Ewing or Gary Lebsack, RMP Team Leader. Copies of the draft document are available at either the Newcastle office or the Casper District Office.

end

Bureau of Land Management
1701 East E Street
Casper, WY 82601

94-18
March 3, 1994
Contact: Kate Padilla
307-261-7600

BLM NEWS

BLM Extends Comment Period

The Bureau of Land Management has extended the public comment period on the draft Newcastle Resource Area Resource Management Plan (RMP). Public comments will be received until April 4, 1994. Comments will be considered before the final RMP is released and prior to issuing a decision.

Comments and/or questions may be addressed to Floyd Ewing, Area Manager at the Newcastle address or comments will also be accepted by telephone at (307) 746-4453 to either Floyd Ewing or Gary Lebsack, RMP Team Leader. Copies of the draft document are available at either the Newcastle office or the Casper District Office.

end

CASPER RLM	
APR - 4 '94	
☒ DM	☐ MN
☒ ADM	☐ FL
☒ PA	☐ SL
☐ AO	☐ BRA
☐ OPR	☐ NRA
☒ LRR	☐ PRA
☐ RGR	☐ Lead Resp

Send cc
to Newcastle

APR. 01 1994

In Reply Refer To:

4000 (934)
1781 (S)

Honorable Alan Simpson
United States Senate
Washington, D.C. 20510

Dear Senator Simpson:

I can appreciate your constituents' misgivings with the Newcastle RMP process. As you may recall our conversation during the Wyoming Heritage Foundation Forum, I expressed concern about BLM's current planning process and talked about our efforts to remedy some of the problems. One of our major struggles has been finding an effective means to obtain public participation early in the process. We are hopeful that the new process we are starting in the Buffalo Resource Area will help alleviate this problem.

This week Don Hinrichsen, our new Casper District Manager, Glen Nebecker of the Casper District, and I met for about two hours with the Niobrara County Resource Users Association and Governor Sullivan to discuss the Newcastle RMP. A list of most of those attending and the subjects we discussed is attached for your information.

The meeting was extremely informative and instructive for me. The people were, in typical Wyoming style, frank and straightforward about their concerns with the plan and the public participation conducted by BLM up to this point.

My review of the situation reveals that the BLM staff in Newcastle attempted to follow current BLM procedures for gaining public awareness and input. However, it certainly has missed the mark!

I committed to the group that there will be no decisions made on the draft Newcastle RMP until we have listened and documented the concerns and input from the local people who are most affected by the plan. I have asked Mr. Hinrichsen to begin immediately to work with all affected County Commissioners, the Niobrara County Resource Users Association, and other interests to resolve the conflicts raised by this RMP.

I also offered, as an alternative, to drop completion of the Newcastle RMP as a separate plan and integrate it into the Buffalo plan now underway. They have agreed to consider this option.

I was very pleased and impressed with this user's association, their organization, knowledge, and their willingness to resolve issues with BLM. I look forward to working with them and using them as a model for our new approach to land use planning.

Also, I am very appreciative of Governor Sullivan's facilitation of our meeting. I am certain his presence added immeasurably to the outcome of our discussion.

Thank you, again, for your interest and support.

Sincerely,

/s/ RAY BRUBAKER

Ray Brubaker
State Director

Attachment

Identical letter sent to Craig Thomas

cc:

Your Casper Office

Mike Dombeck

State Director, BLM

AM, Newcastle

DM, Casper

Public Affairs, Rock Springs

Public Affairs, Casper

Director (220), Rm. 204, LS

RBrubaker:zal:3/30/94 SIMPCONG.RBL

A G E N D A

Presentation to Governor Sullivan,
Mr. Brubaker, Mr. Hinrichsen

Cheyenne, Wyoming
March 28, 1994

1. Donna Ruffing, Chairman, Niobrara County Commissioners - Opening
2. Lee Campbell - ACEC/Fossils
3. Tom Hamilton - Threatened & Endangered/Wildlife Habitat
4. Lew Landkamer - Split Estate
5. Leonard Zerbst - Oil & Gas/Mineral Resources
6. Brad Coffey - Grazing/Riparian/Weeds
7. Jim Nachtman - Boundaries/Fences
8. Shannon Bruegger - Predators/Prairie Logs
9. Lanny Hanson - Accumulation of Lata/Validity
10. Donna Ruffing - Cultural/Historical/Visual Resources/Recreation/Off-Road
11. J.D. Wasserburger - Socio-Economic Impact
12. Jim Kruse - Wild & Scenic/Fire/Niobrara County Resource Assoc.
13. Ross Diercks -
14. Mel ZumBrunnen - Closing

United States Senate

WASHINGTON, DC 20510-5002

March 8, 1994

Ray Brubaker
State Director
Bureau of Land Management
2515 Warren Avenue
Cheyenne, Wyoming 82001

MAR 15 1994

ED	MA
ASD	LMR
CSA	OPNS
SEC	ADMIN
LAN	OF
	LEAD RESP.

Dear Ray:

I am writing to you concerning the recent Bureau of Land Management (BLM) public meeting on the draft RMP of the Newcastle Resource Management Area which was held in Lusk on March 1, 1994. A number of my constituents have contacted me and raised some points that are disturbing to me. I would appreciate having your views on some of the issues they have brought to my attention.

One of the areas of frustration expressed was the lack of advance notice the residents of the area had received on this revision. I am informed that out of approximately 250 attending the meeting, a show of hands indicated that less than 20 people received notification of the draft plan. That is troubling. Nor, apparently, had the Niobrara County Commissioners received advance notice. I am informed that one of the County Commissioners, J.D. Wasserburger, indicated that he had written to the BLM in 1992 requesting that the commissioners be provided regular reports regarding developments in BLM management policy in the resource area. He indicated he received no response to that request. need to follow up

The local BLM office advised those in attendance that notices were sent to all the lessees, corporations and local officials, and media. However, I am also informed that the local newspaper, the Lusk Herald, was omitted from the BLM's notification list. Out of the fifty-six media contacts which were supposedly made, one would presume that the local newspaper would have been a priority. I am further informed that it was mentioned at the meeting that the paper had somehow been dropped off the media mailing list -- is that correct?

In such a short time since the meeting, a number of other issues have been raised. Concern was expressed about who had gathered the base data regarding wildlife and plant life in the area. Some landowners have suggested that they had not been

Ray Brubaker
Marc 8, 1994
Page Two

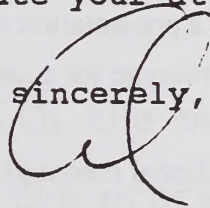
contacted about such surveys being conducted on their property. Among those contacting my office, some have suggested the BLM had never been present, while others suggested that personnel from the BLM simply trespassed "at will." Please look into that.

There are many other concerns that have been raised. Apparently, the maps used were not accurate, the landowners were not consulted, advance notice appears to be lacking, community participation was minimal, and now there is a great distrust about the results of the BLM plan. Many are concerned that policy is being dictated by "others" and that the recent public hearing was viewed as a formality. Handwritten: 11-10-94

I have known you a number of years, Ray, and I know that you do not "do business" this way. You also know that I -- indeed, the entire Wyoming congressional delegation -- do not attempt to "micromanage" local federal agency decisions. Yet I am deeply troubled that so many of my fine constituents have reacted so strongly in such a relatively short time. Something is wrong "out there" and I would be deeply appreciative if you would look into this matter personally and get back to me on this.

Thank you, Ray. I do appreciate your attention to this. I look forward to your reply.

Most sincerely,



Alan K. Simpson
United States Senator

AKS/wss
cc: Gillette Office

Bureau of Land Management
1701 East E Street
Casper, WY 82601

94-21
April 15, 1994
Contact: Kate Padilla
307-746-4455

BLM NEWS

BLM State Director to Attend Public Meeting

BLM Wyoming State Director Ray Brubaker will attend a public meeting in Lusk on April 20 at 7:30 PM in the Fairgrounds Building.

The meeting is in response to public participation on the draft Newcastle Resource Management Plan. "I am impressed with the public's review of the document. They have offered impressive and meaningful comments," Brubaker said.

At the meeting BLM will discuss the process and schedule for completing the document. In addition, the agenda includes a presentation on the Buffalo Resource Management Plan (BRA RMP) which is Wyoming BLM's prototype for ecosystem planning.

BLM is planning additional meetings on both the Newcastle plan and the Buffalo Resource Management Ecosystem Plan throughout the Casper District.

- END -

Meetings Scheduled on BLM draft Plan Set

The Bureau of Land Management will review the draft Newcastle Resource Management Plan at meetings April 20, 7:30 P.M. in Lusk at the Niobrara Fairground Building; May 3, 7:00 P.M. in Sundance at the Crook County Court House; and May 4 in Newcastle in the Galaxy Room of the Fountain Inn.

The meeting is to review with the public the comments received on the draft, discuss the process BLM will follow in revising the draft and the schedule for issuing a final plan. Public comments on the draft RMP will continue to be accepted through May 20.

In addition, a presentation will be made at each meeting on the agency's direction toward ecosystem planning. The Buffalo Resource Management Plan, which encompasses the counties of Johnson, Campbell and Sheridan, is Wyoming's BLM prototype for ecosystem planning.

Bureau of Land Management
1701 East E Street
Casper, WY 82601

94- 22
April 26, 1994
Contact: Kate Padilla
307-261-7600

BLM NEWS

Public Meetings on draft Newcastle Plan scheduled

The Bureau of Land Management will continue to accept comments on the draft Newcastle Resource Management Plan at meetings in Sundance at the Crook County Court House May 3 and in Newcastle in the Galaxy Room at the Fountain Inn on May 4. Both meetings begin at 7:00 p.m.

Casper District Manager Don Hinrichsen, Area Manager Floyd Ewing and Environmental Planning Specialist Glen Nebeker will be on hand to discuss with the public a proposed schedule for finalizing the plan and will summarize the comments received to date. In addition, a presentation will be made on how BLM is approaching ecosystem planning in the Buffalo Resource Area.

The draft Newcastle RMP considers four alternatives for the management of about 291,000 acres of public surface and about 1.4 million acres of public subsurface mineral estate in Crook, Weston and Niobrara counties. The preferred alternative increases the management emphasis on recreation and calls for categorizing specific uses for cultural resources such as conservation for future use, public use, scientific use and others. Oil and gas leasing, grazing and timber harvesting will remain at nearly current levels. The other alternatives analyzed are the no action alternative and two separate combinations of different management practices.

Comments on the draft Newcastle Resource Management Plan may be addressed to the Newcastle Resource Area Office, 1101 Washington Blvd., Newcastle, WY 82701 or by telephone at (307) 746-4453.

end

ACTION: Amendment of Notice of Intent to Prepare an Environmental Impact Statement (EIS).

SUMMARY: This Notice Amends a Notice of Intent to Prepare an Environmental Impact Statement which was published in the Federal Register on March 24, 1994 (59 FR 13995-6). The original Notice of Intent requested scoping comments on the preparation of a joint Environmental Impact Statement and Environmental Impact Report (EIS/EIR) for the proposed construction of a 345 kilovolt electric power transmission line by the Sierra Pacific Power Company. The Bureau of Land Management (BLM) and the California Public Utilities Commission (CPUC) are preparing the combined EIS/EIR through a third party contractor. This Amendment to the Notice is published to announce the dates and locations of the public scoping sessions for the preparation of the EIR/EIS. Members of the public, affected Federal, State, and local agencies, any affected Indian tribes, the proponent of the action, and other interested persons are invited to participate in the scoping process for this project by attending the scoping sessions and providing written and verbal comments or recommendations concerning the issues to be analyzed in the EIS/EIR.

DATES: Public and governmental agency scoping sessions will be held as follows: (1) May 17, 1994 (Tuesday) in Susanville, CA, beginning at 6 p.m., at the Monticola Club, 140 S. Lassen St., Susanville. (2) May 18, 1994 (Wednesday) in Alturas, CA, beginning at 6 p.m., at the Modoc Middle School multi-purpose room 906 W. 4th St., Alturas. (3) May 19, 1994 (Thursday), in Sparks, NV at the Best Western McCarran Inn, 55 E. Nugget, in Sparks. A scoping session for agency concerns of Federal and State agencies will be held from 3 p.m. to 5 p.m., and the scoping session for the public will start at 6 p.m.

ADDRESSES: Written comments on the combined Federal EIS and State EIR must be sent to the California Public Utilities Commission (Attn: Julie Halligan, Project Manager); Commission Advisory and Compliance Division, Environmental and Energy Advisory Branch; 505 Van Ness Ave., room 3207; San Francisco, CA 94102. Written comments should reference BLM case number CACA-31406, and the "Alturas Intertie Project". Written and verbal comments will also be accepted at the scoping meetings.

FOR FURTHER INFORMATION CONTACT: This Amendment to the Notice of Intent to

prepare an EIS is issued by the Associate District Manager, Bureau of Land Management, 705 Hall Street, Susanville, California 96130. For further information on the Federal action, call Peter Humm, BLM Project Manager, at (916) 257-0456.

Dated: April 25, 1994.

Robert J. Sherve,

Associate District Manager.

[FR Doc. 94-10603 Filed 5-3-94; 8:45 am]

BILLING CODE 4310-40-M

[NV-056-94-4333-01 4-00154]

Management Framework Plans, etc.; Nevada

April 20, 1994.

AGENCY: Bureau of Land Management, Interior.

ACTION: Release of the Proposed General Management Plan, Red Rock Canyon National Conservation Area, for public review and comment.

SUMMARY: The Proposed General Management Plan has been developed in conformance with Public Law 101-621-November 16, 1990, which designated Red Rock Canyon as a National Conservation Area. A 60 day comment period will be held from May 1, 1994 through June 30, 1994 to receive public comment on the Proposed Plan. During this period, the Bureau of Land Management will hold two "open houses," which will be informal sessions allowing the public to discuss the Proposed Plan with NCA specialists and gain clarification on issues of concern. In addition, a public hearing is scheduled. The hearing will be a formal process by which individuals will be allowed 3 minutes to testify with testimony being recorded by a court stenographer. The schedule will be as follows:

Open Houses—

May 11, 1994, 4 pm to 9 pm.

May 14, 1994, 4 pm to 9 pm.

Public Hearing—

May 25, 1994, 7 pm to 9 pm.

All of the above sessions will be held at the BLM District Office located at 4765 Vegas Drive, Las Vegas, Nevada. Written comments may be sent to the BLM office throughout the 60 day comment period at P.O. Box 26569, Las Vegas, Nevada 89126.

Individuals wishing to testify at the hearing are requested to notify Gene Arnesen (702 647-5000) prior to May 24, 1994.

For additional information or clarification of items in the Proposed Plan, please contact

Dave Wolf or Gene Arnesen at (702) 647-5000.

Colin P. Christensen,

Acting District Manager.

[FR Doc. 94-10614 Filed 5-3-94; 8:45 am]

BILLING CODE 4310-HC-M

Public Land and Resources; Planning, Programming, and Budgeting

AGENCY: Bureau of Land Management Interior.

ACTION: Notification of resource management planning schedule.

SUMMARY: Resource management planning for the Bureau of Land Management (BLM) administered lands is governed by regulations in 43 CFR 1610.2(b). These regulations require that the BLM publish a planning schedule advising the public of the status of resource management plans (RMP's) in preparation. Projected new RMP starts for the three succeeding fiscal years are also identified to provide the public an opportunity to comment on the projected planning schedule and aid in the coordination of the schedule with other agencies.

SUPPLEMENTARY INFORMATION: A limited number of new starts for RMP's are projected. There are currently 34 RMP efforts underway (not including amendments and revisions). It is forecasted that 11 of the RMP's will be completed in fiscal year 1994 and an additional 11 will be completed in fiscal year 1995. These efforts are having a significant effect on BLM capability to initiate new RMP's and complete maintenance/monitoring and implementation of the existing RMP's.

Upon completion of a major portion of the current ongoing RMP's, the BLM will start a limited number of new RMP's or RMP revisions within its current capability. A priority ranking system will be utilized to allocate the limited new planning efforts. New RMP starts for fiscal year 1994 include Snake River/Deep Creek RMP (Idaho). New starts for 1995 include Malheur/Jordan RMP (Oregon) and Price RMP (Utah). New starts for 1996 include Andrews RMP (Oregon) and Winnemucca/Surprise (Nevada).

The planning process begins with the publication of a Notice of Intent to initiate an RMP. A public notice and an opportunity for participation in each RMP are provided as required by the regulations (43 CFR 1610.2(f)). Publication of the draft RMP and associated draft environmental impact statement as indicated on the schedule is a key opportunity for public comment.

TABLE 1.—BUREAU OF LAND MANAGEMENT PLANNING SCHEDULE—Continued

State, district and resource area	Plan name and type (major resource/issue)	Fiscal year 1994	Fiscal year 1995	Fiscal year 1996	Fiscal year 1997
Medford	Medford RMP (forestry, wildlife, watershed, realty, ACEC).	PRMP/FEIS			
Roseburg	Roseburg RMP (forestry, wildlife, watershed, realty, ACEC).	ARMP/ROD			
Salem	Salem RMP (forestry, wildlife, watershed, realty).	PRMP/FEIS			
Vale	Malheur/Jordan RMP (wildlife, watershed, minerals, range).	ARMP/ROD	NOI	DRMP/DEIS	PRMP/FEIS
Burns	Andrews RMP (wildlife, watershed, recreation, range, who horses, ACEC).				ARMP/ROD
Utah:					
Cedar City, Kanab-Escalante.	Kanab-Escalante RMP (recreation, wildlife).	DRMP/DEIS	PRMP/FEIS	ARMP/ROD	
Dixie	Dixie RMP (recreation, range, wildlife).	DRMP/DEIS	PRMP/FEIS	ARMP/ROD	
Richfield, Henry Mountain.	Henry Mountain RMP (ACEC, wildlife).	DRMP/FEIS	PRMP/FEIS	ARMP/ROD	
Vernal, Diamond Mountain.	Diamond Mountain RMP (wildlife, O&G).	ARMP/ROD			
MOAB, Price Grand	Eastern Utah RMP (O&G, Wildlife, Recreation).		NOI	DRMP/DEIS	PRMP/DEIS
Wyoming:					
Casper, Newcastle	Newcastle RMP (O&G)	PRMP/EIS	ARMP/ROD		
Buffalo	Buffalo RMP revision (O&G, wildlife, range).	DRMP/DEIS	PRMP/FEIS	ARMP/ROD	
Rock Springs, Green River.	Green River RMP (O&G, grazing)	PRMP/FEIS	ARMP/ROD		
Worland, Grass Creek .	Grass Creek RMP (wildlife, watershed).	DRAMP/FEIS	PRMP/FEIS	ARMP/ROD	

Key to planning schedule abbreviations:

ACEC—Area of Critical Environmental Concern.

ARMP/ROD—Approved Resource Management Plan and Record of Decision.

DRMP/DEIS—Draft Resource Management Plan and Draft Environmental Impact Statement.

PRMP/FEIS—Proposed Resource Management Plan and Final Environmental Impact Statement.

NOI—Notice of Intent.

O&G—Oil and Gas.

¹ This RMP will include the entire Winnemucca District as well as the Surprise Resource Area of the California Susanville District.

[FR Doc. 94-10608 Filed 5-3-94; 8:45 am]

BILLING CODE 4310-34-M

Fish and Wildlife Service

Receipt of Applications for Permit

The following applicants have applied for a permit to conduct certain activities with endangered species. This notice is provided pursuant to Section 10(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531, et seq.):

Applicant: Ellen T. Bauder, San Diego, CA, PRT-788074.

The applicant requests a permit to remove and reduce to possession no more than 2 percent of seeds, plant parts or whole plants of the following endangered plants: San Diego button celery (*Eryngium aristulatum* ssp. *parishii*), San Diego mesa mint (*Pogogyne abramsii*), Otay mesa mint (*P. nudiuscula*) and California Orcutt grass (*Orcuttia californica*) from vernal pools in and around Naval Air Station,

Miramar, California, for scientific research on systematics, population dynamics, seed germination, and restoration of vernal pools. Soil samples will be taken from each collection site in Riverside, San Diego, and Orange Counties, California, and may contain Riverside fairy shrimp (*Streptocephalus woottoni*).

Applicant: Zool. Society of San Diego, Escondido, CA, PRT-788682.

The applicant requests a permit to import one captive-bred female kiang (*Equus hemionus holdereri*) from Tierpark Berlin, Berlin, Germany, to enhance the propagation of the species through captive breeding.

Applicant: Brian Bock, Athens, OH, PRT-788597.

The applicant requests a permit to collect blood and tissue samples from tartaruga (*Podocnemis expansa*) and tracaja (*Podocnemis unifilis*) from Colombia, Brazil, Peru and Venezuela for the purpose of enhancement of the survival of the species through genetic

analysis. Sampling will result in sacrificing the specimens.

Written data or comments should be submitted to the Director, U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, Room 432, Arlington, Virginia 22203 and must be received by the Director within 30 days of the date of this publication.

Documents and other information submitted with these applications are available for review, subject to the requirements of the Privacy Act and Freedom of Information Act, by any party who submits a written request for a copy of such documents to the following office within 30 days of the date of publication of this notice: U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, room 420(c), Arlington, Virginia 22203. Phone: (703/358-2104); FAX: (703/358-2281).

b. Marine garden stairway construction area.

1. Closed April 18, 1994, to September 18, 1994.

This closure and restriction notice does not apply to:

1. Any Federal, State, or local official or member of an organized rescue, medical, or firefighting unit while in the performance of fire, emergency, law enforcement, or other similar duty;

2. Any Bureau of Land Management, U.S. Coast Guard, or U.S. Fish and Wildlife Service employee, agent, contractor, or cooperator while in the performance of an official duty; and

3. Any person or member of a group or institution expressly authorized by permit, license, agreement, or other similar authorization while in the performance of activities covered by the authorization.

Dated: April 26, 1994.

Mark Lawrence,

Acting District Manager.

[FR Doc. 94-10842 Filed 5-4-94; 8:45 am]

BILLING CODE 4310-33-M

[WY-93-4410-02]

Newcastle Resource Area, WY

AGENCY: Bureau of Land Management, Interior.

ACTION: Comment period extension for the *Draft Environmental Impact Statement for the Newcastle Resource Management Plan for the BLM Administered Public Lands in the Wyoming Portion of the Newcastle Resource Area*.

SUMMARY: The Bureau of Land Management (BLM) is extending the public comment period for the Draft Environmental Impact Statement (EIS) for the Newcastle Resource Management Plan (RMP). Comments will be accepted until June 10, 1994.

The draft EIS for the Newcastle RMP describes and analysis four alternative RMPs, including the BLM's preferred alternative, for managing the Wyoming portion of the Newcastle Resource Area. The planning area is located in Crook, Weston, and Niobrara Counties, in northeastern Wyoming. When completed, the Newcastle RMP will provide the management direction for future land and resource management actions on approximately 291,000 acres of public land surface and approximately 1,700,000 acres of Federal mineral estate administered by the BLM within this portion of the Newcastle Resource Area.

The draft EIS focuses on resolving three key issues that were identified

with public involvement early in the planning process. These issues are: (1) Retention or disposal of public lands; (2) surface disturbance; and (3) special management areas designations.

There is one designated area of environmental concern (ACEC) within the Newcastle RMP planning area, the Whoopup Canyon ACEC. The preferred alternative recommends that the Whoopup Canyon ACEC designation be retained and that the area of the ACEC be expanded in size. The potential for new ACEC designations was also explored. One potential new ACEC was identified and is proposed in the preferred alternative. This involves the BLM administered public land surface in the Lance Creek Fossil Area.

During development of the draft EIS, the BLM conducted a Wild and Scenic Rivers review of BLM administered public lands that lie along waterways within the planning area. There were no BLM administered public lands in the planning areas that were found to meet the Wild and Scenic Rivers eligibility criteria to be given further consideration for inclusion in the Wild and Scenic Rivers System.

The coal screening process (including application of the coal unsuitability criteria under 43 CFR part 3461) was not conducted for the planing effort. Any interest in coal exploration or leasing will be handled on a case by case basis. If an application for a coal lease is received sometime in the future, an appropriation land use environmental analysis will be conducted (which will include conducting the coal screening process), to determine whether or not the coal areas applied for are acceptable for development and leasing consideration. The RMP will be amended by necessary. To date, there has been no interest expressed to the BLM for leasing and development of BLM-administered coal in the planning area.

Wilderness management and wild horse management were not addressed in the planning effort. There are no wilderness areas or wilderness study areas on BLM-administered public lands in the planning area. In addition, there have been no other areas with wilderness characteristics identified on public lands in the planning area. There are no known wild horse or wild horse herd management areas in the planning area.

When approved, the Newcastle RMP will guide BLM's management of the public lands in the Newcastle Resource Area.

DATES: Written comments will be accepted until June 10, 1994.

ADDRESSES: Copies of the Newcastle RMP draft EIS are available from the BLM Newcastle Resource Area Office at 1101 Washington Boulevard, Newcastle, Wyoming 82701, or the BLM Casper District Office at 1701 East "E" Street, Casper Wyoming 82601. Comments should be sent to the Newcastle Area Manager at the Newcastle Resource Area Office.

FOR FURTHER INFORMATION CONTACT: Floyd Ewing, Newcastle Area Manager, or Gary Lebsack, Newcastle RMP Team Leader, at the above address or telephone 307-746-4453.

SUPPLEMENTARY INFORMATION: The Newcastle Resource Area is responsible for managing the BLM administered public lands in Crook, Niobrara, and Weston countries in Wyoming, and all BLM administered public lands in Nebraska. Management of the BLM administered public lands in Nebraska is covered under the Nebraska Resource Management Plan completed in 1992.

Within the Newcastle RMP planning areas, there are varied and intermingled land surface ownerships and overlapping mineral ownerships. Therefore, the administrative jurisdictions for land use planning and for managing the land surface and minerals are also varied, intermingled, and sometimes overlapping. For this reason, it is important to understand that the Newcastle RMP draft EIS does not address management of lands or minerals within the planning areas that are privately owned or owned by the State of Wyoming or local Governments (about 1,000 acres). It also does not address those Federally owned minerals within the planning area that are under Federal land surface managed by other Federal agencies (about 420,000 acres).

The draft EIS for the Newcastle RMP presents four alternatives, multiple use RMPs for managing the BLM administered public lands in the planning area, Alternative A (continuation of present management) and three other alternatives that suggest different combinations and emphases for managing the various resource and land uses on the BLM administered public lands, on the basis of needs, opportunities, and public demand. The four alternative plans focus on allocating public lands and resources among their valid uses and prescribing general management actions that would be taken. The preferred alternative is a combination of parts of Alternatives A, B, and C and represents what BLM believes is the best balance between the public land and resource uses and environmental protection in the planning area. The various impacts that

Bureau of Land Management
1701 East E Street
Casper, WY 82601

94-24
May 11, 1994
Contact: Kate Padilla
307-261-7600

BLM NEWS

Comment period Extended on Newcastle Draft Plan

The Bureau of Land Management will continue to work on the final Newcastle Resource Management Plan and extend the comment period on the draft until June 10, according to State Director Robert Bennett.

The decision is in response to comments from county commissioners in Niobrara, Crook and Weston counties who have unanimously requested the BLM stay on course and finish the Newcastle Resource Management Plan.

BLM former State Director Ray Brubaker, in response to public criticism over one alternative in the draft to designate Lance Creek Fossil Area as an Area of Critical Environmental Concern, recommended the public consider a different approach to the current planning process, specifically ecosystem planning.

The current planning process does not adequately address planning needs in areas with fragmented federal ownership as exist in the Newcastle Resource Area according to Brubaker. The draft Newcastle RMP considers four alternatives for the management of about 291,000 acres of public surface and about 1.4 million acres of public subsurface mineral estate in Crook, Weston and Niobrara counties.

The public was asked to consider three options that could address identified deficiencies in the draft NRA\RMP:

- fold the draft NRA plan into the ecosystem plan currently under development for the Buffalo Resource Area

- rewrite and reissue another NRA draft Resource Management plan

- continue on the current process and issue a final EIS.

"What we heard from the public was that a lot of effort and federal money has been invested in the current process, and if BLM is willing to work more closely with the public, a final can be developed that is acceptable," Bennett said. Therefore, BLM would proceed accordingly.

Public meetings will be scheduled to keep the people informed on the adjustments in the document before it is finalized. Comments on the draft RMP may be addressed to the Newcastle Resource Area Office, 1101 Washington Blvd., Newcastle, WY 82701 or by telephone at (307) 746-4453.

end

1610

BRA RMP

NRA RMP

NOV 30 1994

Dear Interested Citizen:

We are in the process of revising the Buffalo Resource Management Plan and finalizing the Newcastle Resource Management Plan. In order to ensure we get the information to you, we are asking you to please take the time to check the mailing label above and make any necessary corrections in the space provided below. Also, please mark and/or list which interests you have in order that we may mail you only pertinent information.

Title: _____
(if appropriate)

New address: _____

I wish to be mailed information pertaining to (you may check more than one):

___ Buffalo resource management plan revision
___ Newcastle final resource management plan
___ Other: _____

I am a member of:

___ Conservation group
___ Professional group
___ Industry
___ Other: _____

Thank you for taking your time to help us update our mailing list. Please return your changes in the enclosed self-addressed envelope.

Sincerely,

/s/ Michael J. Karb:

ACTING

District Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
CASPER DISTRICT OFFICE
1701 EAST E STREET
CASPER, WYOMING 82601



1610 NRA RMP

DEC 16 1994

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear County Commissioner:

As you know, we are in the process of completing the Final Newcastle Resource Management Plan EIS. Staff members are currently analyzing and preparing responses to the comments received on the Draft RMP EIS. Any re-writing of the document and changes to maps will soon follow. We are scheduled to complete the final document in April 1995.

Last spring we agreed to meet with you on the development of the final RMP EIS. We intend to keep this commitment. Our delay in getting back with you is due in large part to a Federal statute which stipulates conditions on how we can meet. We became aware of the law and its complications after a recent lawsuit filed in the Pacific Northwest this summer. Our counsel has carefully advised us of conditions we can follow and still satisfy requirements of the Federal Advisory Committee Act (FACA).

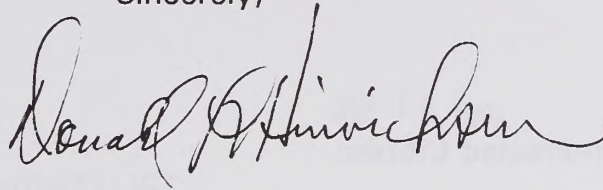
First, we would like to have an open house on February 22, 1995 from 1:00 PM to 8:00 pm in our Newcastle office. This will provide us with a public opportunity to review our progress, address general questions about the planning process, and allow anyone to discuss the accuracy of any data to be presented in the final document. We feel that an exchange such as this will be useful to validate such information. We cannot however, accept comments or advice related to plan decisions. This is where we will get into trouble with FACA.

We will contact you early in January regarding the open house. If you have difficulty with our suggested time or location please offer suggestions which you feel better represent our constituency. We will make media announcements and mail a letter to all those on our mailing list announcing the open house.

We suggest a second meeting when the document is complete. This will be in April. At this time we ask you to consider hosting a briefing on the decisions contained in the final document. We will again confer with you on the time and location, and whether you would like the public to attend. This approach would be consistent with the guidance we have been given relating to FACA.

If you have any questions about this or just want to discuss it in more detail please feel free to call me (307-261-7600) or Floyd Ewing (307-746-4453) in Newcastle. Thank you for your continuing interest in participating in this planning effort.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald P. Hinchey". The signature is fluid and cursive, with a large initial "D" and a long, sweeping underline.

District Manager

cc:

Mike Sullivan, Governor
Jim Geringer, Governor Elect
Robin Bailey, Simpson Field Office, Gillette
Evelyn Ebzery, Wallop Field Office, Sheridan
Bobbi Brown, Rep. Craig Thomas Office, Casper
State Director (910 and 934)
Newcastle Resource Area Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
CASPER DISTRICT OFFICE
1701 EAST E STREET
CASPER, WYOMING 82601

TAKE
PRIDE IN
AMERICA

1610

BRA RMP

NRA RMP

DEC 27 1994

Dear Interested Citizen:

We are in the process of finalizing the Newcastle Resource Management Plan/ Environmental Impact Statement. You sent us a comment letter on this document, and we are asking you to please take the time to check the mailing label above and make any necessary corrections in the spaces provided below. If you wish to receive a copy of the final plan, please indicate that below also. Or, if you would like your name removed from the list, please let us know.

Title:

(if appropriate)

New address:

I would like to receive the final planning document,
and I would like to remain on your mailing list.

Yes ☐

No ☐

I **DO NOT** want to receive the final planning document,
and I **DO NOT** want to remain on your mailing list.

Yes ☐

No ☐

Thank you for taking your time to help us. Please return your response in the enclosed self-addressed envelope.

Sincerely,

ACTING

District Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
CASPER DISTRICT OFFICE
1701 EAST E STREET
CASPER, WYOMING 82601



1610 NRA RMP

JAN 19 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear County Commissioner:

As you know, we are in the process of completing the Final Newcastle Resource Management Plan EIS. Staff members are currently analyzing and preparing responses to the comments received on the Draft RMP EIS. Any re-writing of the document and changes to maps will soon follow. We are scheduled to complete the final document in April 1995.

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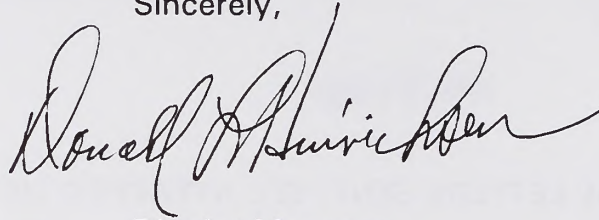
First, we would like to have an open house on February 22, 1995 from 1:00 PM to 8:00 pm in our Newcastle office. This will provide us with a public opportunity to review our progress, address general questions about the planning process, and allow anyone to discuss the accuracy of any data to be presented in the final document. We feel that an exchange such as this will be useful to validate such information. We cannot however, accept comments or advice related to plan decisions. This is where we will get into trouble with FACA.

We will contact you early in January regarding the open house. If you have difficulty with our suggested time or location please offer suggestions which you feel better represent our constituency. We will make media announcements and mail a letter to all those on our mailing list announcing the open house.

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If you have any questions about this or just want to discuss it in more detail please feel free to call me (307-261-7600) or Floyd Ewing (307-746-4453) in Newcastle. Thank you for your continuing interest in participating in this planning effort.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald W. Huie". The signature is fluid and cursive, with a large initial "D" and a long, sweeping underline.

District Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT NEWCASTLE RESOURCE AREA

1101 Washington Boulevard
Newcastle, Wyoming 82701



1610 NRA RMP

FEB 3 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear XXXXXXXXXX:

In a letter I previously sent you I told you that we would like to have an open house on February 22, 1995. Our intent was to discuss and review our progress on the Newcastle Resource Management Plan (RMP), to address any general questions about the planning process, and to discuss the accuracy of our data. It now appears that scheduling that meeting was premature. Missing from this meeting was any specific discussion on recommended solutions to the list of issues raised during the comment period on the draft RMP.

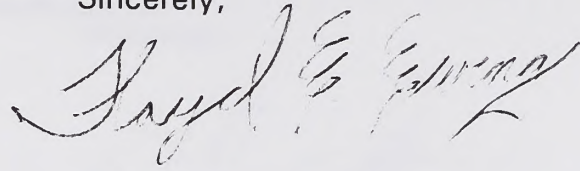
The staff is making good progress responding to issues and concerns mailed to us during the comment period. An almost complete draft of the final document should be completed by March 1. At that time, I will be better able to tell you how we plan to address the concerns that have been raised by the draft document.

What we agreed to do last spring was to share with each of you and any interested publics, a direct response to a number of cited issues. What I have planned to do is put together a summary paper of the issues with BLM's recommended actions for resolving those issues. I will have this summary paper mailed to everyone on the Newcastle RMP mailing list. This would provide immediate closure to those outstanding issues. Shortly after the summary paper is mailed out, I will work with you to schedule local meetings as you suggest as appropriate. We will prepare any formal notification announcing the time and place of the meeting(s). At those meetings, my staff and I will be able to discuss with you any concerns that may remain regarding our recommended actions. Furthermore, additional factual information can be presented when our assessment may be deficient. The staff will be glad to take this information into account before sending our recommended plan to the state director for his signature. We will also share our development schedule and the remaining opportunities to participate in the plan.

You can expect to receive the summary by mid March. About two weeks following that date, I will call you to discuss a public meeting (open house) date and place. At that same time, I will also be putting paid public announcements in the local newspapers.

We very much appreciate your patience and understanding. I apologize for any inconvenience this may have caused you.

Sincerely,

A handwritten signature in dark ink, appearing to read "Floyd E. Ewing". The signature is fluid and cursive, with the first name "Floyd" being more prominent and the last name "Ewing" written in a more compact, cursive style.

Floyd E. Ewing
Area Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT NEWCASTLE RESOURCE AREA

1101 Washington Boulevard
Newcastle, Wyoming 82701



1610

MAR 23 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear XXXXXXXXXX:

Enclosed is a copy of the summary paper I will soon be sending to our mailing list concerning the finalization of the Newcastle Resource Management Plan (RMP). Because of your past input and continued interest and concern, I wanted to personally send you a copy for your review.

This summary covers some of the issues of major concern voiced by the wide variety of groups and individuals who provided input during the development process or in response to the draft plan that was issued in September of 1993.

I have scheduled an open house for April 25, 1995 from 9:30 a.m. to 8:00 p.m. at the BLM office in Newcastle. At this time I will be available, as well as members of my staff, to discuss or explain the contents of the final plan and EIS. Please read over the enclosed summary and feel free to call me if you have questions about it or any issue that was not discussed. If you feel it would be advantageous to have an additional open house at another time and location please let me know.

I will look forward to seeing you at the open house in Newcastle.

Sincerely,

Floyd E. Ewing
Area Manager

Enclosure

BUREAU OF LAND MANAGEMENT
NEWCASTLE RESOURCE AREA
110 Washington Boulevard
Newcastle, WY 82701
(307) 746-4453

NEWCASTLE RESOURCE MANAGEMENT PLAN UPDATE

April 1995

Dear Friends of BLM:

I wanted to contact each of you who have been involved in our planning effort for the Newcastle Resource Management Plan (RMP). I'd like to tell you about the comments received on the Draft Environmental Impact Statement (EIS), changes to the preferred alternative in the Draft EIS we are considering for the final EIS, and where we will go from here.

The response we've had on the Draft EIS has been tremendous. On behalf of our entire planning team, I would especially like to thank the county commissioners of the three-county area, the Niobrara Resource Council, the Sierra Club, and everyone else who gave us comments, expressed concerns, and worked together with us to bring this document to a Final EIS. I also appreciate any additional information you supplied about the Newcastle Resource Area (NRA).

We are in the process of completing the Final EIS. This has been a very complex process, but it is also a very necessary one in order to ensure your comments and concerns were addressed. Our responses to your comments will be published in the Final EIS.

The following, based on your comments, is what we felt were the major concerns you identified.



YOUR CONCERNS, OUR RESPONSES

Concern: Paleontology and the proposal to designate the Lance Creek fossil area as an area of critical environmental concern (ACEC).

Response: An ACEC designation for the Lance Creek area was proposed early in the planning effort for the Newcastle RMP. The Draft EIS was not clear in presenting the fact that the proposed ACEC designation applies only to the BLM-administered public land surface within the Lance Creek fossil area. It would not apply to any other lands in the area that are owned and administered by private parties or by local or state governments. Map 3-1 in the Draft EIS did not differentiate between BLM-administered public land surface and any other land surface ownership; thus, it appeared that the ACEC designation would be applied to all lands in the identified area regardless of ownership. That map (3-1) and the paleontological resource management provisions in the preferred alternative of the Draft EIS also leads one to believe that the proposed ACEC is the only place in the NRA containing fossils or significant fossils where conditional or mitigation requirements for paleontological resources need to be applied.

Both of these misleading aspects resulted in many public comments on the proposed ACEC. In considering these comments, we have re-evaluated and decided to reject the proposed ACEC designation. A more practical and comprehensive option for dealing with fossil management on the BLM-administered public lands will be included in the final EIS.

While some fossils from the Lance Creek area are significant, they are no more significant or unique when compared to others found elsewhere in the resource area. Over much of the resource area spectacular marine reptile and fish fossils are found in older rocks; skeletons of early mammals occur in younger rocks. There is little evidence that noteworthy fossils have been, or are likely to be, found on the BLM-administered public lands compared to other lands in either the Lance Creek area or elsewhere in the resource area. Therefore, it would be impractical to place an ACEC designation on a few BLM-administered public land parcels in the Lance Creek area or on all the BLM-administered public land parcels scattered over the resource area. Instead, we will simply continue to carry out existing policy for managing significant fossils wherever they occur on BLM-administered public lands. This policy includes requirements for reviewing scientific literature, surveying some areas for fossils if surface disturbance is expected, and making provisions for mitigating or preventing fossil damage. This policy applies to any existing or future action on BLM-administered public surface. It also applies to any BLM authorizations that may be issued for actions related to mineral sales and leases or to federally owned locatable minerals activities. This policy will continue to apply in split estate areas where the BLM administers the federal mineral estate under land surface that is owned and administered by private parties or by local and state governments. In these split-estate areas, the policy would be applicable to the BLM-authorized federal actions or authorizations related to exploring and developing the federal minerals to mitigate, avoid, or prevent damage to the fossils which are owned by the land surface owner (see the following concern on split estate). Several consulting firms have paleontologists available to do this work during the environmental analysis process. Also, future federal mineral leases issued in the Newcastle Resource Area will include a notice informing the lessee of the BLM's policy and the actions that may be required. Thoughtful application of existing management techniques, along with the lease notice, can be expected to provide a more consistent, overall treatment of fossil resources than that presented

in the Draft EIS.

In 1986, the Office of the Solicitor suggested that fossil collecting on BLM-administered public surface be managed under the Federal Land Policy and Management Act (FLPMA); before that, fossil collecting was managed under the Antiquities Act of 1906. It has been BLM policy for many years to allow hobby collecting of petrified wood and common invertebrate fossils on the BLM-administered public lands without a permit. However, commercial collection of fossils is not allowed on BLM-administered public surface. The BLM requires a permit in order to collect vertebrate fossils because we consider them nonrenewable and scientifically significant.



On BLM-administered public surface vertebrate fossils may be collected only by qualified paleontologists who obtain permits from the BLM and who agree to deposit all specimens in a public institution where they remain the property of the American people. BLM encourages the permitted collection of vertebrate fossils on the public lands, along with scientific data that greatly increase the research value of specimens. Several paleontological resources use permits have been issued for BLM-administered public lands in the Lance Creek fossil area in recent years.

BLM recently hired a paleontologist whose responsibilities are in Wyoming and the surrounding region. This specialist is available to supply expertise and to help make decisions about fossil resources, and is encouraging other paleontologists to focus their research and collecting activities on the BLM-administered public lands.

The preferred alternative in the Draft EIS proposed that interpretive signs and displays about fossils be placed on BLM-administered public lands in the Lance Creek fossil area. Many public comments argued that signs could invite damage to or theft

of fossils, unwanted and uncontrolled entry onto private lands, damage to private property, and inconvenience for landowners. For these reasons, signs will not be included in the provisions for fossil resource management on BLM-administered public lands in the Lance Creek fossil area. However, in the future signs or exhibits about paleontological resources may be developed and used for informational or educational purposes. Individuals who want to collect fossils on private or state land must get permission from the landowner and are responsible for knowing the land status of areas where they collect. BLM-administered public land boundaries are marked in places where public access routes cross them, but providing boundary signs for all areas of public land would be too expensive and impractical.

The sections on Paleontology in the Draft EIS have been revised to help the reader understand the significance of paleontological resources in the Newcastle Resource Area.

Concern: BLM's responsibilities and authorities on split-estate lands.

Response: By the late 1800s, much of the public domain lands (federal lands) had been transferred to private ownership either by sale or homesteading. The annual report for 1882 from the US General Land Office pointed out that companies had fraudulently acquired great quantities of valuable public coal lands and other public lands. In response to this and subsequent investigations, President Theodore Roosevelt withdrew in 1906 more than 66 million acres of public coal lands from settlement and location. Congress questioned whether or not the President had authority to do this. In 1910, Congress passed the General Withdrawal or Pickett Act, giving the President power to "temporarily" withdraw public lands from settlement and location for public purposes.

In response to the uproar that this created with politicians, business people, and homesteaders President Roosevelt signed the Act of March 3, 1909, which allowed homesteaders who had settled public coal lands to patent those lands as

long as the coal was reserved to the United States. The act of June 22, 1910 permitted homesteaders to file for public coal lands as long as the coal was reserved to the United States.

The policy of reserving mineral rights was extended to public petroleum lands in 1909 by President Taft. Two years later, during Woodrow Wilson's administration, the policy was extended to all public lands. The list of minerals that could be reserved was enlarged to include phosphate, nitrate, potash, and asphaltic minerals. Finally, the Stockraising Homestead Act of 1916 reserved all minerals to the United States. This is how "split-estate" lands (areas where the land surface and minerals are owned by different entities) came about in northeast Wyoming.

As part of the mineral policies initiated during his Presidency, Roosevelt had advocated a leasing policy for coal and petroleum lands, but Congress resisted the idea. In 1917, potassium deposits could be leased because potassium was essential to America's production of military explosives during World War I. This prompted the policy to extend leasing to coal, petroleum, natural gas, sodium, phosphate, and oil shale in 1920. Under the Mineral Leasing Act of 1920 individuals and companies could prospect for and develop the minerals listed.

There are two general categories of split estate lands. One category is those lands where the land surface is federally-owned and administered by the BLM, while some or all of the minerals under them are owned and administered by either private parties or by local or state governments. The other category is those lands where the land surface is owned and administered by private parties or by local or state governments, and some or all of the minerals under them are federally owned and administered by the BLM. "Some or all of the minerals" means there may also be more than one owner among the different types of mineral estates. For example, in some lands, the federal government may own only the oil and gas or only the coal, or both, while the other mineral resources in those same lands (locatable, saleable,

and other leasable minerals) are owned by the state or by private parties.

In either category, the mineral owners are entitled access to their minerals to explore for and develop them and to prudently use an area of the land surface and surface resources that are directly necessary to those exploration and development activities. Mineral owners are required to compensate for damage to surface owner improvements, to avoid or mitigate other affects of their activities, and to reclaim the surface. A new appendix containing more detail on split estate lands will be printed in the final EIS.

From many of the public comments on the draft EIS there appears to be a misunderstanding about the BLM's responsibilities and authorities related to split-estate lands. Maybe we can clarify these things.

The **BLM DOES NOT** have any jurisdiction or statutory authority to make land use planning or resource management decisions for the use of any land surface that is owned by private parties or by local or state governments.

It was not intended for the preferred alternative in the draft document to suggest that the BLM can direct or dictate how private landowners or state and local governments manage their own lands. The BLM has no authority to do that.

It is also important to understand that the BLM **DOES** have the authority **AND THE RESPONSIBILITY** to plan for and manage the federal mineral estate under these split estate lands. Planning and management of the federal mineral estate includes:

- making planning and management decisions that salable and leasable federal minerals will or will not be sold or leased, and implementing those decisions;
- deciding whether or not mining claims may be filed for locatable federal minerals and implementing those decisions; and,

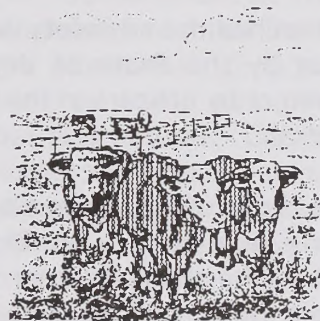
- deciding any required conditional provisions, mitigation measures, and land surface reclamation requirements that would be included in any federal minerals sales or leases (to include use authorizations) that the BLM may issue, related to exploration and development of the federal minerals in these lands, and implementing those decisions.

Such conditions, mitigation measures, and reclamation requirements are **NOT** requirements that the BLM places upon the land surface or the surface owners. Rather, these are requirements attached to any use authorizations the BLM would issue that are related to the exploration and development of the federal minerals.

These requirements are a result of both federal and state laws enacted in the interest of protecting the general environment, regardless of who owns the land surface. They also protect rights and properties of the surface owners from unnecessary and undue degradation and damage that may be caused by any activities related to "federal actions" that the BLM would take or authorize, such as selling, leasing, exploring for and developing the federal minerals. The BLM prefers to work with both the developers of the federal minerals and the surface landowners in reaching mutually acceptable surface disturbance conditions, mitigations, and reclamation requirements.

Concern: The interpretation that livestock grazing is a surface disturbance.

Response: The following should help clarify various interpretations of the narrative under *Issue B* on page 6 of the Draft EIS relating to surface-disturbing activities. BLM is responsible for administering surface-disturbing activities only on BLM-administered public land surface and for adminis-



tering exploration and development activities related to federally owned minerals where they result in surface disturbance on split-estate lands. The use of vegetation by livestock and other grazing animals is not a surface-disturbing activity. We define surface-disturbing activities as those that result in the physical disturbance and movement or removal of the land surface, soil, and vegetation associated with such things as excavation and development activities with heavy equipment (for example, blasting, strip and pit mining, and roads).

Concern: The proposal not to control prairie dogs on BLM-administered public lands.

Response: Prairie dog management has been a BLM concern in northeast Wyoming since the Newcastle Resource Area was established in 1977. The proposal in the preferred alternative of the Draft EIS was to not allow prairie dog control on public land administered by the BLM in the Wyoming portion of the NRA unless they are causing resource damage or they become a hazard to human health and safety.

Resource damage would be documented by BLM personnel from the resource area office and the grazing lessee, adjacent landowners, or other interests. This could include resource damage occurring on private or state lands from prairie dog towns located on BLM-administered public lands.

Human health and safety determinations would be made by the State of Wyoming Department of Health or by officers of the US Centers for Disease Control.

Unless one of the above situations were occurring, prairie dog control on BLM-administered public land in the resource area would not be allowed. Prairie dogs and their towns are an important component of the prairie ecosystem and are valuable in providing habitat and a food source for a number of wildlife species, many of which are species of special management concern. For these reasons and because the number of prairie

dog towns and the acreage they affect on BLM-administered public land are small, the above proposal was made.

Concern: That the proposal to establish the Stateline Special Recreation Management Area (SRMA), while still allowing other uses of the area, will work against all interests and uses in the area.



Response: This proposal is in recognition of the recreational opportunities the proposed SRMA affords and the increasing demand for outdoor recreation areas and activities on BLM-administered public land in the resource area. While other uses would not be precluded in the SRMA, it would be required that all uses or activities (including recreational uses and activities) that do take place are conducted or designed so that they do not detract from the recreational uses or values of the area.

Concern: Whether or not access to BLM-administered public lands in the resource area is lacking and whether or not increased access to public land will adversely affect private lands and private landowners.

Response: The Draft EIS identified the need for more access to BLM-administered public lands but does not propose obtaining access to each parcel of public land in the resource area. Only necessary access for managing the public lands is intended. This may be provided through land exchanges, easements, or other means. Condemnation of private lands for access routes is not an option and is not proposed or promoted.

Concern: Whether or not the BLM-administered public lands in the resource area need more identifying signs.

Response: BLM-administered public land boundaries are marked where access routes cross property lines or where problems have occurred. This will continue to be done on a case-by-case basis as problems are identified and as funding allows.

Concern: Public land sales and exchanges are too time-consuming and costly.

Response: This was an concern identified during scoping at the start of this planning effort. There are about 297,000 acres of BLM-administered public land in the resource area consisting of mostly small parcels scattered over a three-county area. Many opportunities exist to improve our management capability by selling or exchanging public land parcels that are difficult or impossible to manage. Exchanges are the preferred method and are used to block-up public lands into larger units that would be more manageable.

Some comments were received identifying the length of time required to complete a public land sale or exchange. While we agree, we confess that the legal and procedural requirements as well as the time involved to complete land actions makes it difficult to speed up the process.

Briefly, the following steps must be taken to complete a land exchange or sale:

1. Determine if the proposal is in conformance with land use planning, review land status to determine if the lands are subject to application, and determine if the application meets all requirements of the law and regulations.
2. Secure views of other agencies that may have an interest in the lands, including state and local planning and zoning departments.
3. Check for unpatented mining claims, and if necessary, complete a validity exam on them.
4. Complete an appraisal of the subject lands.
5. Conduct a field examination and other investi-

gations to gather information and data on the environmental considerations and proper classification of the lands.

6. Complete an environmental assessment and publish a notice to solicit views and comments from the public concerning the proposal. Also, assure that the action is in conformance with applicable laws.

Based on the above review and evaluation, BLM officials may approve or disapprove the action.

Concern: Whether or not federal oil and gas leasing should be more restrictive.

Response: The BLM does not close areas of federally owned oil and gas (whether or not on split estate lands) to leasing or development unless evidence indicates that development would be incompatible with other valuable resource or land uses and the conflict cannot be mitigated. Federal oil and gas leases include necessary stipulations. Exploration and development activities are also conditioned with mitigation measures and other necessary requirements to protect soil, water, air, special management areas, sensitive resources, steep slopes, critical wildlife habitat, riparian areas, and other important land and resource values.

None of the alternatives in the Draft EIS propose that stipulations or mitigation requirements on federal oil and gas leasing and development activities be lessened. Two alternatives in the Draft EIS, including the preferred alternative, propose more of such requirements or more stringent requirements than the other alternatives. Unless there is information to indicate that these requirements are not adequate there appears to be no reason to require even more stringent measures or to prohibit oil and gas leasing and development.

In the resource area, surface disturbance related to oil and gas exploration and development is declining. This is because more wells are being plugged and abandoned and the location reclaimed than there are new wells being drilled.

Concern: Whether or not policy changes in the wild and scenic rivers review process will change the outcome of the review.

Response: When the wild and scenic rivers review was conducted for the Draft EIS, the BLM's Wild and Scenic Rivers Manual included an additional eligibility criterion--"Jurisdictional Considerations." This criterion provided that, where the BLM-administered public land surface represents less than 40% of the shoreline in a waterway or waterway segment being reviewed, that public land surface involved will be considered to be ineligible for further consideration. As a result, all 19 parcels of BLM-administered public lands that contained outstandingly remarkable values were ineligible for further consideration in the process. The jurisdictional eligibility criterion was rescinded in December 1993 because jurisdictional considerations are factors of suitability rather than eligibility criteria and should be addressed in the suitability determination phase of the review process. The same 19 parcels of BLM-administered public lands located along 8 waterways in the resource area were found to meet the eligibility criteria. However, during the suitability review, we determined that none of the BLM lands involved met the suitability factors and will not be considered for inclusion in the wild and scenic rivers system. Thus, the policy change did not result in any change in the final outcome of the wild and scenic rivers review. The detailed documentation of the review will be updated and included as an appendix in the Final EIS.

Some of the comments received questioned why some of the waterway review segments were referred to as "stream" rather than by name. This is because many lower order waterways are not named on US Geological Survey topographic maps, which were used for the review. Locations



of all the waterway review segments are on file in the Newcastle Resource Area Office.

Concern: Threatened and Endangered (T&E) or Sensitive Species

Response: Sixty six (66) vegetation species that occur on BLM-administered public lands in the Newcastle Resource Area have been included on a list of plants that are of special concern. Eleven (11) of these plants have been proposed for designation as "sensitive" plant species. These 11 species have been proposed for this designation based on research information, compiled through BLM inventory contracts, to obtain information on the occurrence of T&E or "candidate" plant and animal species and species of special concern in the resource area.

Candidate species are those plants or animals that are designated as candidates for listing as T&E species under the Endangered Species Act. Sensitive species are defined as those plants and animals that could easily become endangered or extinct in a state. Upon designation by the BLM State Director, sensitive species are given similar management attention as is given to candidate species.

Management on BLM-administered public lands must be consistent with the principles of multiple use. Therefore, where these sensitive species occur on public land, BLM will strive to use conservation practices to keep them and their habitats from decreasing and to keep them from being designated as candidate or T&E species. Where these same species occur on split estate lands (private surface/federal mineral), conditioning of the exploration and development of the federally owned minerals and related activities that the BLM would authorize would be handled in the same manner, to the extent possible.

The goal of this approach is to try to sufficiently protect these sensitive species so that it will be unnecessary for them to be listed as either candidate species or as T&E species. As you may be aware, when plant or animal species are listed as

T&E, they become more universally protected, by law, on most lands (animals on all lands and plants on federally managed lands). We believe it would be of mutual benefit to all parties within the Newcastle Resource Area if this could be avoided.

WHAT'S NEW IN THE FINAL DOCUMENT

The Final EIS will be a summary document that includes the proposed Newcastle RMP. It will also include your comments on the Draft EIS, and our responses to them. The preferred alternative that was presented in the Draft EIS will be modified to develop the proposed RMP. The modifications will result from your comments, incorporation of new information, and corrections of errors. The Final EIS will include:

A Glossary to help you better understand some of the more confusing terms we use.

The **"Land and Mineral Ownership"** table (1-1) has not been revised but will be included in the final EIS.

The **"Paleontology"** and **"Socioeconomics"** sections of chapter 3 in the Draft EIS ("The Affected Environment") will be rewritten. The paleontology section will discuss fossils throughout the NRA and the history of paleontological research in this area. The socioeconomics section will clarify information presented in the Draft EIS and will make better comparisons between among economic sectors.

The **"Proposed Newcastle RMP"** section in chapter 4 (Environmental Consequences) of the Draft EIS will be included in its entirety. This will essentially be developed through major rewrites (paleontology and socioeconomics) and corrections or additions to the environmental consequences of the preferred alternative from the Draft EIS.

An appendix discussing split estate is being included in the Final EIS to present information on how split estate came to be as well as the limitations of our management responsibilities and authorities on split estate lands.

The updated Wild and Scenic Rivers appendix (C in the Draft EIS) will be included in the Final EIS.

From the Draft EIS, the "General Location" map (1-1), the "Areas of Natural or Historic Interest" map (3-1), the "Recreation Development and Exchange of Use Areas" map (3-13), the "Visual Resource Management" map (3-14) have all been revised and clarified and will be included in the Final EIS.

The **"Surface Ownership"** map has not been revised but will be included in the Final EIS.

RMP OPEN HOUSES

April 25, from 9:30 a.m. to 8:00 p.m. at the Newcastle Resource Area office.

/s/ Floyd Ewing
Newcastle Resource Area Manager





United States Department of the Interior

BUREAU OF LAND MANAGEMENT NEWCASTLE RESOURCE AREA

1101 Washington Boulevard
Newcastle, Wyoming 82701



1610
NRA RMP

JUL 21 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear XXXXXXXXXX:

This letter will confirm my telephone conversation with Major Miller on July 18, 1995 concerning the status of the development of the Newcastle Resource Management Plan (RMP). At that time I read the press release (copy enclosed) that will be sent to our mailing list on the 31st of July, and discussed the procedure for review and comment on the final document. I expect to have a working copy of the final around the middle of August, at which time I will provide a copy to each County Commissioner and a copy for the Commissioners office. As was discussed, the comments will have to come back to the BLM through the Commissioners office because of the provisions of the Federal Advisory Committee Act.

When the final is available for review, I will contact you again to discuss the amount of time you feel will be needed for review. We will be glad to discuss the RMP/EIS with the Commissioners after they have reviewed the document and answer questions that they may have.

Sincerely,

Floyd E. Ewing
Area Manager

Enclosure



United States Department of the Interior

BUREAU OF LAND MANAGEMENT NEWCASTLE RESOURCE AREA

1101 Washington Boulevard
Newcastle, Wyoming 82701



1610
NRA RMP

JUL 21 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear XXXXXXXXXX:

This letter will confirm my telephone conversation with Ted Elliott on July 18, 1995 concerning the status of the development of the Newcastle Resource Management Plan (RMP). At that time I read the press release (copy enclosed) that will be sent to our mailing list on the 31st of July, and discussed the procedure for review and comment on the final document. I expect to have a working copy of the final around the middle of August, at which time I will provide a copy to each County Commissioner and a copy for the Commissioners office. As was discussed, the comments will have to come back to the BLM through the Commissioners office because of the provisions of the Federal Advisory Committee Act.

When the final is available for review, I will contact you again to discuss the amount of time you feel will be needed for review. We will be glad to discuss the RMP/EIS with the Commissioners after they have reviewed the document and answer questions that they may have.

Sincerely,

Floyd E. Ewing
Area Manager

Enclosure



United States Department of the Interior

BUREAU OF LAND MANAGEMENT NEWCASTLE RESOURCE AREA

1101 Washington Boulevard
Newcastle, Wyoming 82701



1610
NRA RMP

JUL 21 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear XXXXXXXXXX:

This letter will confirm my telephone conversation with Donna Ruffing on July 18, 1995 concerning the status of the development of the Newcastle Resource Management Plan (RMP). At that time I read the press release (copy enclosed) that will be sent to our mailing list on the 31st of July, and discussed the procedure for review and comment on the final document. I expect to have a working copy of the final around the middle of August, at which time I will provide a copy to each County Commissioner and a copy for the Commissioners office. As was discussed, the comments will have to come back to the BLM through the Commissioners office because of the provisions of the Federal Advisory Committee Act.

When the final is available for review, I will contact you again to discuss the amount of time you feel will be needed for review. We will be glad to discuss the RMP/EIS with the Commissioners after they have reviewed the document and answer questions that they may have.

Sincerely,

Floyd E. Ewing
Area Manager

Enclosure



United States Department of the Interior

BUREAU OF LAND MANAGEMENT NEWCASTLE RESOURCE AREA

1101 Washington Boulevard
Newcastle, Wyoming 82701



1610
NRA RMP

JUL 21 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear XXXXXXXXXX:

Attached is the letter and news release that was sent to the Crook, Weston and Niobrara County Commissioners on July 21, 1995. This was done as part of the continuing consultation with the County Commissioners and to give them a "heads up" prior to mailing the news release to everyone on our mailing list. This was discussed with the Chairperson of each set of County Commissioners. Also enclosed are copies of correspondence with the Niobrara Resources Association and Mr. Jim Nachtman of LS&J Livestock concerning Freedom of Information Requests made by them regarding the RMP. As replies are prepared concerning these requests copies will be forwarded to you.

If you have any questions regarding these matters please give me a call at (307) 746-4453. Thank you.

Sincerely,

Floyd E. Ewing
Area Manager

Enclosure



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Newcastle Resource Area
1101 Washington Boulevard
Newcastle, Wyoming 82701-2968

1610
NRA RMP

July 21, 1995

Niobrara Resources Association
c/o Jim Kruse, President
P.O. Box 64
Lance Creek, WY 82222

Dear Mr. Kruse:

This is in response to your letter of July 4, 1995 regarding the Freedom of Information Act (FOIA) Request you filed on March 9, 1994 with my office and the status of the Newcastle Resource Management Plan and accompanying Environmental Impact Statement.

First, in no way can we excuse our failure to comply with your FOIA and I apologize. There have been several explanations given as to why your request was not handled in the proper manner, but I do not think any excuse is acceptable.

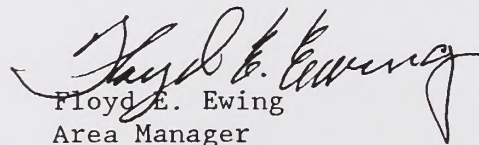
Your FOIA request is being processed at this time by the Casper District Office FOIA Coordinator who is currently searching for the documents requested. Again, my apology for this error, and I appreciate your understanding allowing us to make it right.

With regard to the RMP/EIS it is my intent to provide the county governments in Weston, Niobrara and Crook counties with a copy of the draft, the changes made to the draft and the responses to the comments received on the draft. I have visited with the chairpersons of each of the county commissions to discuss the most appropriate approach and effective way to proceed with the review.

We will issue a press release announcing release of the information to the county commissioners. It is my hope the review will take place the end of August.

Again, thank you for permitting us to correct the FOIA error.

Sincerely,


Floyd E. Ewing
Area Manager



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Newcastle Resource Area
1101 Washington Boulevard
Newcastle, Wyoming 82701-2968

1610 NRA RMP

July 21, 1995

LS&J Livestock Company
c/o Jim Nachtman, President
2459 Dull Center Road
Douglas, WY 82633

Dear Mr. Nachtman:

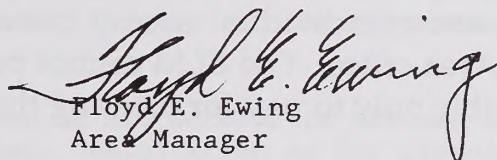
During a recent review of our files it became apparent that the response given to your March 21, 1994 Freedom of Information Act (FOIA) request concerning the development of the Newcastle Resource Management Plan was not adequate. I apologize for this and my office and the Casper District Office are currently researching and preparing a new response to your request that I hope will be more satisfactory.

Also, in regard to the development of the Newcastle Resource Management Plan, it is my intent to provide the county governments in Weston, Crook and Niobrara Counties with a copy of the draft, the changes made to the draft and the responses to the comments received on the draft. I have visited with the chairpersons of each of the county commissions to discuss the most appropriate approach and effective way to proceed with the review.

We will issue a press release announcing release of the information to the county commissioners. It is my hope the review will take place the end of August.

Again, my apology for our previous FOIA response and I hope our forthcoming response will be more satisfactory.

Sincerely,


Floyd E. Ewing
Area Manager

Bureau of Land Management
Casper, WY 82601

95-19
July 31, 1995
Kate Padilla
(307) 261-7600

BLM NEWS

Mark 7/25/95

BLM TO REVIEW THE FINAL RMP/EIS WITH LOCAL GOVERNMENT

CASPER: The Bureau of Land Management will be reviewing changes to their Draft Newcastle Resource Management Plan Environmental Impact Statement with county governments in Weston, Niobrara and Crook counties before the final document goes to print. The review will take place later this summer.

The county commissioners will have the opportunity to review the final document which includes responses received on the draft RMP/EIS. This is in response to requests during the public meeting in April on the draft RMP/EIS, where the BLM agreed to continue local government consultation. Consulting with the county commissioners is part of the BLM's resource management planning process.

"This does not mean the commissioners will be making land use decisions on BLM-administered public lands. That is ultimately BLM's responsibility. This consultation is another step in public participation to ensure the data used is correct and to clarify points that could lead to confusion or misunderstanding," according to Casper District Manager Don Hinrichsen.

The BLM is interested in all levels of communication with the public and encourages anyone interested in reviewing the RMP/EIS prior to its printing to contact individual county commissioners, their offices, or the Newcastle Resource Area office. The BLM cannot provide copies to everyone because funds are available only to pay for printing the final document.

"We are interested in going to the printer with the most accurate document in the most efficient and timely manner with as much public participation as possible," Hinrichsen said.

The BLM will issue another press release at the same time as the copies of the RMP/EIS are mailed to the county commissioners.

END



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Casper District Office
1701 East E Street
Casper, Wyoming 82601-2167

1600 (NRMP)

SEP 29 1995

IDENTICAL LETTERS SENT; SEE ATTACHED LIST

Dear XXXXXXXXXXXX,

As you may know, Floyd Ewing, our Area Manager in Newcastle is retiring, ending a career of conscientious public service. Until a new manager is selected, Mike Karbs, our Associate District Manager in Casper will be working with you on the Newcastle RMP.

Because the BLM-administered public lands and minerals in the Newcastle Resource Area are interspersed with private property in Crook, Niobrara, and Weston counties, intergovernmental communication and coordination with county plans and policies are necessary considerations in developing the BLM land use planning and management decisions.

As agreed during the review of the Newcastle RMP draft EIS, we are going to consult with the elected officials of each county before finalizing our responses to the public comments on the draft EIS and before completing the final EIS for the Newcastle RMP. The purpose for the consultation is to find any errors of fact or omissions in our responses to the comments and to assure the final EIS will be as clear and understandable as possible.

We are currently putting together the final EIS for the RMP, which will include our responses to the nearly 350 comment letters and needed changes and additions to the EIS. The final EIS, when printed, will contain the proposed Newcastle Resource Management Plan, the comment letters and our responses to them, and the revisions to the EIS.

Mike will contact each commission chairperson in mid October to discuss what actions and followup are necessary to complete consultation on the planning effort. We appreciate your continuing interest and help in our planning work.

Sincerely,

District Manager

cc: State Director (910)
State Director (930)
Attn: Gene Schaaf

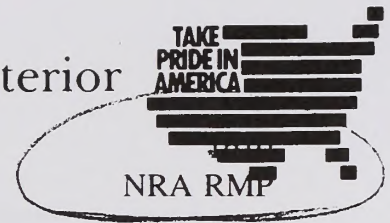
Wyoming, State Land & Farm Loan Office
Attn: Paul Kruse
Herschler Building, Third Floor West
122 West 25th Street
Cheyenne, WY 82001



United States Department of the Interior

BUREAU OF LAND MANAGEMENT NEWCASTLE RESOURCE AREA

1101 Washington Boulevard
Newcastle, Wyoming 82701



Dear Interested Citizen:

JAN 08 1997

The second *Draft Resource Management Plan/Environmental Impact Statement (RMP EIS)* for *Public Lands in the Wyoming Portion of the Newcastle Resource Area* will be available for public review and comment this summer. The original Draft RMP/EIS was issued in September 1993. Due to the large response from the public and special interest groups, and the fact that some comments were received after the comment period ended, we have decided to revise the draft and reissue it as a second draft for further comment. All comments received during the comment periods on the first Draft RMP EIS have been considered, and changes in this revised draft document have been made based on those comments. The final EIS, when printed, will contain the proposed Newcastle Resource Management Plan, the comment letters and our responses to them on both the first and second drafts.

The Bureau of Land Management's Newcastle Resource Area administers all public lands and minerals in Crook, Niobrara, and, Weston counties. The first draft document presented four possible multiple use management plans for those public interests: Alternative A (continuation of present management) and three other alternatives that provide a variety of management choices. Following are several major concerns identified in the comment letters we received on the first draft and our changes to it as a result of those comments.

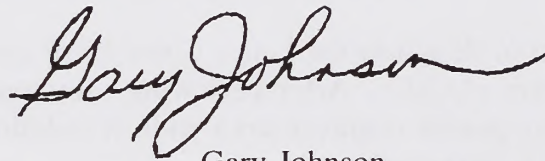
- a) The proposal to designate the Lance Creek fossil area as an area of critical environmental concern (ACEC). **After reviewing comments we have modified this proposal to incorporate resource area-wide stipulations regarding fossil resources in lieu of ACEC designation.**
- b) BLM's responsibilities and authorities on split-estate lands. **An appendix resending information on how split estate came to be as well as the limitations of our management responsibilities and authorities on split estate lands is included in the second draft document.**
- c) The erroneous interpretation that livestock grazing is a surface disturbance. **A Glossary is included to help you better understand some of the more confusing terms we use.**
- d) The proposal not to control prairie dogs on BLM-administered public lands unless to resolve resource damage or for human health and safety reasons. **Prairie dogs and their towns are an important component of the prairie ecosystem and are valuable in providing habitat and a food source for a number of wildlife species, many of which are species of special management concern. However, unacceptable resource damage caused by prairie dogs would be documented by BLM personnel, the grazing lessee, adjacent landowners, or other interests. This could include resource damage occurring on private or state lands from prairie**

dog towns located on BLM-administered public lands. Human health and safety determinations would be made by the State of Wyoming Department of Health or by officers of the US Centers for Disease Control. Unless one of the above situations were occurring, prairie dog control on BLM-administered public land in the resource area would not be undertaken.

- e) Several maps did not clearly distinguish between public land and private surface or were misleading. The "General Location" map (1-1), the "Areas of Natural or Historic Interest" map (3-1), the "Recreation Development and Exchange of Use Areas" map (3-13), the "Visual Resource Management" map (3-14) have all been revised and clarified.

To reduce printing and mailing costs, we are attempting to closely determine the number of copies that will need to be printed. Your name is on our mailing list to receive this revised draft document because you received a copy of the first draft and/or made comments on the document. Enclosed in this letter is a self-addressed postcard. Please return the postcard by February 15, 1997 with the appropriate option marked.

Sincerely,

A handwritten signature in cursive script that reads "Gary Johnson". The signature is fluid and extends to the right.

Gary Johnson
Area Manager
Newcastle Resource Area

Enclosure

BACK OF CARD

Please indicate your option by marking the appropriate line(s):

_____ I would like a copy of the revised draft document. (Your name will automatically remain on our mailing list.)

_____ I would **not** like a copy of the revised draft document. However, I would like to **remain** on your mailing list.

_____ I would **not** like a copy of the revised draft document, and I would like my name **removed** from your mailing list.

Please make any corrections to your mailing address below.

**Please return your card by February 15, 1997
or your name will automatically be removed from our mailing list.**

FRONT OF CARD

**Bureau of Land Management
Casper District Office
Attn: Patricia Hiller
1701 East "E" Street
Casper, WY 82601**

WYOMING BLM NEWS

CASPER DISTRICT OFFICE 1701 EAST "E" STREET CASPER, WY 82601

DATE: JANUARY 1, 1997

NUMBER: 97-08

CONTACT: KATE PADILLA

PATRICIA HILLER

261-7600

BLM TO REISSUE DRAFT DOCUMENT

CASPER: The Bureau of Land Management's Newcastle Resource Area will be reissuing a revised draft resource management plan/environmental impact statement for public lands in the Newcastle resource area for further public review and comment, according to a decision by Wyoming BLM State Director Al Pierson. The plan should be available for public review in early spring 1997. The decision to reissue the draft document was based on the large amount of comments from the public and special interest groups.

The first draft document, issued in September 1993, presented four possible multiple use management plans for those lands. All comments received during the review period on that draft RMP EIS have been considered, and changes in the revised draft document have been made based on those comments.

For additional information, or to request a copy of the draft document, interested persons may call the Bureau of Land Management's Newcastle Resource Area office at 746-4453.

(end)



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Newcastle Resource Area
1101 Washington Boulevard
Newcastle, Wyoming 82701-2968

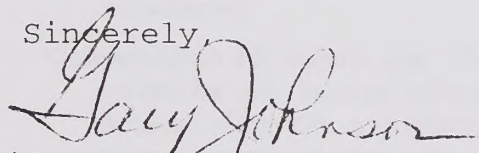
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April 8, 1997

In an effort to keep you informed on our progress in reissuing the Draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) for the Newcastle Resource Area, I am including an updated proposed timeline for the entire process. Due to a slight delay from internal coordination and review, we have a new projected target date for the public comment period.

If this process changes, I will keep you updated. If you have any questions, please call myself, Jack Hanson, or Shelley Peele at 307-746-4453.

Sincerely,



Gary Johnson
Area Manager

Attachment: RMP Timeline

GLOSSARY OF TERMS

Active preference: The currently authorized livestock grazing use on public lands in an allotment, measured in animal unit months (AUMs) of forage.

Actual use: The total grazing use estimated to have taken place, measured in animal unit months (AUMs) of forage annually.

Allotment: An area of land designated and managed for livestock grazing. An allotment may include intermingled private, state, public, and other federally administered lands that are administered for grazing. The number of livestock and period of use are stipulated for each allotment. An allotment may consist of several pastures or may be only one pasture.

Allotment categorization: The grouping of livestock allotments into the categories “M” (maintain current condition), “I” (improve current condition), or “C” (manage custodially while protecting existing resource values). The criteria that determine the allotment categorization are described in Appendix G in the first draft document.

Animal unit month (AUM): The amount of forage needed to sustain one cow and calf pair, five sheep, or one horse for one month.

Authorized officer: Any employee of the Bureau of Land Management to whom has been delegated the authority to make the final, binding decision or take specific action, or both, as an official representing the United States Government. Such authority has legal base in statute or regulation.

Avoidance area: An area designated to be avoided due to some resource value that may become damaged or detracted from if development activities were allowed. Examples of an avoidance area may be a recreation site or known cultural site. An area may also be an avoidance area if some hazard exists such as a landslide area. The area may not be totally unavailable but should be avoided if possible.

Biological diversity: Biological diversity is the variety of life and its processes. Although vastly complex, it includes some measurable distinctions like genetic differences within and among species, species variations, associations of species with each other and their environment, and the patterns and linkages of these biological communities across geographical areas (Keystone Center 1991).

Inventory, monitoring, research, data management, and information sharing are needed for understanding the elements of biological diversity that exists in the Newcastle planning area.

There is a need to identify biologically diverse areas and conserve their richness of plant and animal species. The Federal Land Policy and Management Act mandates inventory of the public lands and the use of inventories in management. According to the Keystone Center, BLM’s multiple-use management of public lands promotes biological diversity because, under this management, a variety of ecological stages of habitat are developed and maintained, each with its particular plant and animal communities. Also, the variety of landscapes and habitat types making up the public lands provides naturally for biological diversity.

The BLM policy requires that habitats be managed with emphasis on biological communities and natural systems to ensure self-sustaining populations and an abundance and diversity of wildlife, fish, and plant resources on the public lands; and that rare, vulnerable, and representative habitats, plant and animal communities, and natural systems be conserved. The Newcastle RMP EIS considered the effects of the alternatives on biological diversity by using the evaluation of habitat as a starting point.

Carrying capacity: The maximum number of animals that can be sustained on a given area without damaging vegetation or related resources. Carrying capacity of a given area may vary from year to year because of fluctuating forage production, which is primarily due to differing amounts of precipitation.

Category 2C species: A species of plant or animal showing evidence of survival vulnerability, in which the evidence of vulnerability is not sufficient to support listing of the plant or animal as threatened or endangered.

Conservation for future use: This category is reserved for any unusual cultural resource which, because of scarcity, a research potential that surpasses the current state of the art, singular historic importance, cultural importance, architectural interest, or comparable reasons, is not currently appropriate for consideration as the subject of scientific or historical study that would result in its physical alteration. A cultural property or location included in this category is considered worthy of segregation from all other land or resource uses that would threaten the maintenance of its present condition or setting. It will remain in this use category until specified provisions are met in the future.

Crucial winter range: Winter habitat on which a wildlife species depends for survival. Because of severe weather conditions or other limiting factors, no alternative habitat would be available.

GLOSSARY

Discharged use: Cultural sites may be assigned to this category when they were previously qualified for assignment to any of the other categories but no longer possess the qualifying characteristics for that use or for assignment to an alternative use. Sites may also be assigned to discharge use when the cultural property's scientific use potential was so slight that it was exhausted at the time the property was recorded and no alternative use is deemed appropriate.

Diversity: The relative abundance of wildlife species, plant species, plant communities, and habitats in an area.

Ecosystems and Ecosystem Management: An ecosystem is an intricate group of organisms within their environmental communities, working as an ecological unit or natural system. Plants and animals, including humans, are a part of this dynamic process of living and nonliving interaction. The BLM's mission is to efficiently manage these ecosystems.

Ecosystem management is a process that considers the total environment. It requires the skillful use of ecological, economic, social, and managerial principles in managing ecosystems to produce, restore, or sustain ecosystem integrity and desired conditions, uses, products, values, and services over the long term. Management of individual components of ecological systems for immediate needs is tempered or expanded to responsible management centered on long-term goals and objectives targeted to the entire ecological system. The principles of ecosystem management, used in BLM's day-to-day management of the public lands and resources, include recognition that people and their social and economic needs are an integral part of ecological systems. It is consistent with the BLM's mission and direction under the FLPMA and it is supported by other laws guiding the BLM's mission.

Effective ecosystem management will be incorporated into implementation of the Grass Creek RMP, into site-specific implementation plans, and into daily management decisions.

Forage: All browse and herbaceous foods that are available to grazing animals.

Forb: A flowering plant whose above-ground stem does not become woody and is not grass or grasslike.

Full suppression: A strategy for extinguishing fires that requires immediate and continuous aggressive attack in the most cost-effective manner, with the least amount of property damage or resources lost. Full suppression may include control, containment,

or confinement of a wildfire to meet land management objectives.

Functional-at-risk: Riparian/wetland condition is functional, but soil, water, and/or vegetation make the area susceptible to degradation.

Grazing preference: The total number of animal unit months (AUMs) of livestock grazing on public lands apportioned and attached to base property owned or controlled by a permittee or lessee.

Interdisciplinary: Characterized by participation or cooperation among two or more disciplines or fields of study.

Limited suppression: A fire strategy used when full control of a fire is extremely difficult or when resource values do not warrant the expense associated with full suppression.

Management use: This category is applied to any cultural property considered most useful for controlled experimental study that would result in its physical alteration, to be conducted by the BLM or other entities concerned with the management of cultural properties.

Monitoring: The orderly collection, analysis, and interpretation of resource data to evaluate progress toward meeting resource management objectives.

No surface occupancy (NSO): The term "no surface occupancy" is used in two ways. It is used in one way to define a no surface occupancy area where no surface-disturbing activities of any nature or for any purpose would be allowed. For example, construction or the permanent or long-term placement of structures or other facilities for any purpose would be prohibited in an NSO area.

The other way the "no surface occupancy" term is used is as a stipulation or mitigation requirement for controlling or prohibiting selected land uses or activities that would conflict with other activities, uses, or values in a given area. When used in this way, the NSO stipulation or mitigation requirement is applied to prohibit one or more specific types of land and resource development activities or surface uses in an area, while other--perhaps even similar--types of activities or uses (for other purposes) would be allowed. For example, protecting important rock art relics from destruction may require closing the area to the staking of mining claims and surface mining, off-road vehicle travel, construction or long-term placement of structures or pipelines, power lines, general purpose roads, and livestock grazing. Conversely, the construction of fences to protect rock art from vandalism or from trampling or breakage by

GLOSSARY

livestock, an access road or trail, and other visitor facilities to provide interpretation and opportunity for public enjoyment of the rock art would be allowed. Further, if there were interest in development of leasable minerals in the area, leases for oil and gas, coal, and so forth, could be issued with a "no surface occupancy" stipulation or mitigation requirement for the rock art site, which would still allow access to the leasable minerals from adjacent lands and underground.

The term "no surface occupancy" has no relationship or relevance to the presence of people in an area.

Off-road vehicle (ORV) management designations:

Designations apply to all off-road vehicles regardless of the purposes for which they are being used. Emergency vehicles are excluded. The ORV designation definitions have been developed in cooperation with representatives from the US Forest Service, US Park Service, and BLM state and district personnel. BLM recognizes the differences between off-road vehicles and over-the-snow vehicles in terms of use and impact. Therefore, travel by over-the-snow vehicles will be permitted off existing routes and in all open or limited areas (unless otherwise specifically limited or closed to over-the-snow vehicles) if they are operated in a responsible manner without damaging the vegetation or harming wildlife.

Closed. Vehicle travel is prohibited in the area. Access by means other than motorized vehicle is permitted.

Open. Vehicle travel is permitted in the area (both on and off roads) if the vehicle is operated responsibly in a manner not causing, or unlikely to cause, significant undue damage to or disturbance of the soil, wildlife, wildlife habitat, improvements, cultural, or vegetative resources or other authorized uses of the public lands.

Limited

- a. Vehicle travel is permitted only on existing roads and vehicles routes which were in existence prior to the date of designation in the *Federal Register*. Vehicle travel off of existing vehicle routes is permitted only to accomplish necessary tasks and only if such travel does not result in resource damage. Random travel from existing vehicle routes is not allowed. Creation of new routes or extensions and/or widening of existing routes is not allowed without prior written agency approval.

- b. Vehicle travel is permitted only on roads and vehicles routes designated by BLM. In areas where final designation has not been completed, vehicle travel is limited to existing roads and vehicle routes as described above. Designations are posted as follows:

1. Vehicle route is open to vehicular travel.
2. Vehicle route is closed to vehicular travel.

- c. Vehicle travel is limited by number or type of vehicle. Designations are posted as follows:

1. Vehicle route is limited to four-wheel drive vehicles only.
2. Vehicle route is limited to motorbikes only.
3. Area is closed to over-the-snow vehicles.

- d. Vehicle travel is limited to licensed or permitted use.

- e. Vehicle travel is limited to time or season of use. Posted:

Seasonal closure to all motor vehicles (the approximately dates of closure are indicated).

- f. Where specialized restrictions are necessary to meet resource management objectives, other limitations also may be developed. Posted:

Recreational ORV play area.

Potential natural community: The community that would become established if all successional sequences were completed without interferences by man under the present environmental conditions. This term is synonymous with climax community.

Prescribed fire: The skillful application of fire (by planned or unplanned ignition) to wildland fuels in either their natural or modified state under specified conditions to allow the fire to burn in a predetermined area while producing the fire behavior required to achieve certain management objectives.

Prevention of significant deterioration (PSD): The process incorporated in the Clean Air Act which places emission limitations on specified new or modified sources. PSD regulations are intended to limit deterioration of air quality that is currently cleaner than national ambient air quality standards.

Proper functioning condition: Riparian/wetland areas are functioning properly when adequate vegetation, landform, or large weedy debris is present to dissipate stream energy associated with high water flows thereby reducing erosion and improving water quality; filter sediment, capture bedload and air

GLOSSARY

floodplain development; improve floodwater retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian/wetland areas is a result of interaction among geology, soil, water, and vegetation.

Public land: Any land or interest in lands owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, except lands located on the outer Continental Shelf and lands held for the benefit of Indians, Aleuts, and Eskimos. (43 CFR 1601.0-5)

Public use: This category is applied to any cultural property found to be appropriate for consideration as an interpretive exhibit in place, a subject of supervised participation in scientific or historical study, or related educational and recreational uses by members of the general public.

Range condition: The existing state of range vegetation in an area described in comparison to the climax (natural potential) plant community for that area. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the climax plant community. Range condition is rated as: potential natural—more than 75% of the vegetation is in a climax state; later seral—51% to 75% of the vegetation is climax; mid seral—26% to 50% is climax; and, early seral—less than 26% of the vegetation is climax.

Range improvement: Any activity or program on or relating to rangelands designed to improve production of forage, change vegetation composition, control patterns of use, provide water, stabilized soil and water conditions, or provide habitat for livestock or wildlife. Range improvement projects may be fences, reservoirs, brush control, or spring and well developments.

Range site: A distinctive kind of rangeland that differs from other kinds of rangeland in its ability to produce a characteristic natural plant community. A range site is capable of supporting a plant community that differs from other communities in the kinds of percentages of plant species or in total vegetative production by the community.

Recommended stocking level: The level of livestock use measured in animal unit months (AUMs) recommended in the technical guides produced by the Soil

Conservation Service. This recommended level is based on the productivity of individual areas called “range sites” and adjusted by the range condition.

Recreation opportunity spectrum (ROS): A continuum used to characterize recreation opportunities in terms of setting, activity, and experience opportunities. Four of six total classes are represented on BLM-administered public lands in the planning area. These are semiprimitive nonmotorized, semiprimitive motorized, roaded natural and rural.

Rest-rotation: A prescribed pattern of grazing use that provides sequential rest for various parts of the range unit for at least one year.

Riparian habitat: Common usage refers to the green zones along the banks of streams and ponds and such wetlands as springs or wet meadows. Other usage defines it as any area characterized by vegetation dependent on more water than is available to normal upland vegetation. The BLM’s usage is “an area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent on free water in the soil.” See also *Wetlands Jurisdictional Wetlands*.”

Roaded natural: One of the six classes of the recreation opportunity spectrum. Roaded natural areas offer about equal recreational opportunities for affiliation with other user groups or isolation from sights and sounds of human activities. Such areas provide the opportunity for visitors to have a high degree of interaction with the natural environment. Challenge and risk opportunities are not very important except in specific challenging activities. The practice of outdoor skills may be important. Opportunities for both motorized and nonmotorized recreation are present.

Rural: One of the six classes of the recreation opportunity spectrum. In rural areas, opportunities to experience recreation in affiliation with individuals and groups are prevalent, as is the convenience of recreation sites. These factors generally are more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant except in activities involving challenge and risk.

Season of use: The part of the year in which livestock grazing is authorized on a given range area, as specified in the grazing lease.

GLOSSARY

Scientific use: This category is applied to any cultural property determined to be suitable for consideration as the subject of scientific or historical study using currently available research techniques, including study that would result in its physical alteration. Inclusion in this category signifies that the property need not be conserved in the face of an appropriate research or data recovery (mitigation) proposal.

Semiprimitive motorized: One of the six classes of the recreation opportunity spectrum. Semiprimitive motorized areas offer some opportunities for isolation from the sights and sounds of human activities, but not as much as with opportunities for semiprimitive nonmotorized recreation. Use of these areas involves the opportunity for visitors to have a high degree of interaction with natural environment, to have moderate challenge and risk, and to use outdoor skills. Such an area provides an explicit opportunity to use motorized equipment while in the area.

Semiprimitive nonmotorized: One of the six classes of the recreation opportunity spectrum. Semiprimitive nonmotorized areas offer opportunities for isolation from the sights and sounds of human activities, but not as much as with opportunities for primitive recreation. Use of these areas involves the opportunity for visitors to have a high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills.

Seral stage: The present state of vegetation of a range site in relation to the potential natural community for the site. Vegetation status is the expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble those of the potential natural community. The classes are potential natural community, late seral, mid-seral, and early seral.

Sociocultural use: This category is applied to any cultural resource that is perceived by a specified social and/or cultural group as having attributes that contribute to maintaining the heritage or existence of that group.

Surface Disturbance (or surface-disturbing activities): The physical disturbance and movement or removal of the land surface and vegetation, it ranges from the very minimal to the maximum types of surface disturbance associated with such things as off-road vehicle travel or use of mechanized, rubberized, or tracked equipment and vehicles; some timber cutting and forest silvicultural practices; excavation and development activities associated with use of heavy equipment for road,

pipeline, power line and other types of construction; blasting; strip, pit and underground mining and related activities, including ancillary facility construction; gas and oil well drilling and field construction of development and related activities; range improvement project construction; and recreation site construction.

Mitigation of surface-disturbing activities centers around surface reclamation and the control and prohibition of surface uses. Mitigation is associated with concerns for such things as movement of disturbed or denuded soil (by water, air, or gravity); erosion, water quality (sedimentation, salinity pollution); wildlife habitat (vegetative and special, aquatic or terrestrial); vegetative composition, cover of productive capacity (quality, quantity) for consumptive and nonconsumptive uses (grazing, scenic values, watershed stability); surface and subsurface cultural and paleontological values; and other subsurface values (cave or karst systems, aquifers).

Suspended preference: Part of the grazing preference which is temporarily withheld from the currently authorized (active) grazing use, measured in animal unit months (AUMs) of forage.

Trend: The direction of change in the condition of health of the range, usually gauged in relation to its natural potential and determined by observation over a period of time.

Utilization: The percentage of forage that has been consumed or destroyed by during a specific period.

Wetland: Defined by the U.S. Fish and Wildlife Service as "areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support and which, under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions." The BLM's usage is virtually synonymous with riparian area, but included associated waters such as ponds or streams, and all other wet areas such as springs, wet meadows, bogs, swamps, and sloughs.

Visual resource management (VRM): The planning, design, and implementation of management objectives for maintaining scenic values and visual quality. The system is based on research that has produced ways of assessing aesthetic qualities of the landscape in objective terms. After inventory and evaluation, lands are given relative visual ratings (management classes), which determine the amount of modification allowed to the basic elements of the landscape. Following are the five classes.

GLOSSARY

VRM Class I: This class applies to areas where the objective is to maintain a landscape setting that appears unaltered by man.

VRM Class II: This class applies to areas where the objective is to design proposed alterations so as to retain the existing character of the landscape.

VRM Class III: This class applies to areas where the objective is to design proposed alterations so as to partially retain the existing character of the landscape.

VRM Class IV: This class applies to areas where the objective is to provide for management activities which require major modification of the existing character of the landscape.

VRM Class V: This class applies to areas where the natural character has been drastically altered, and the area requires rehabilitation to upgrade it to one of the above classifications.

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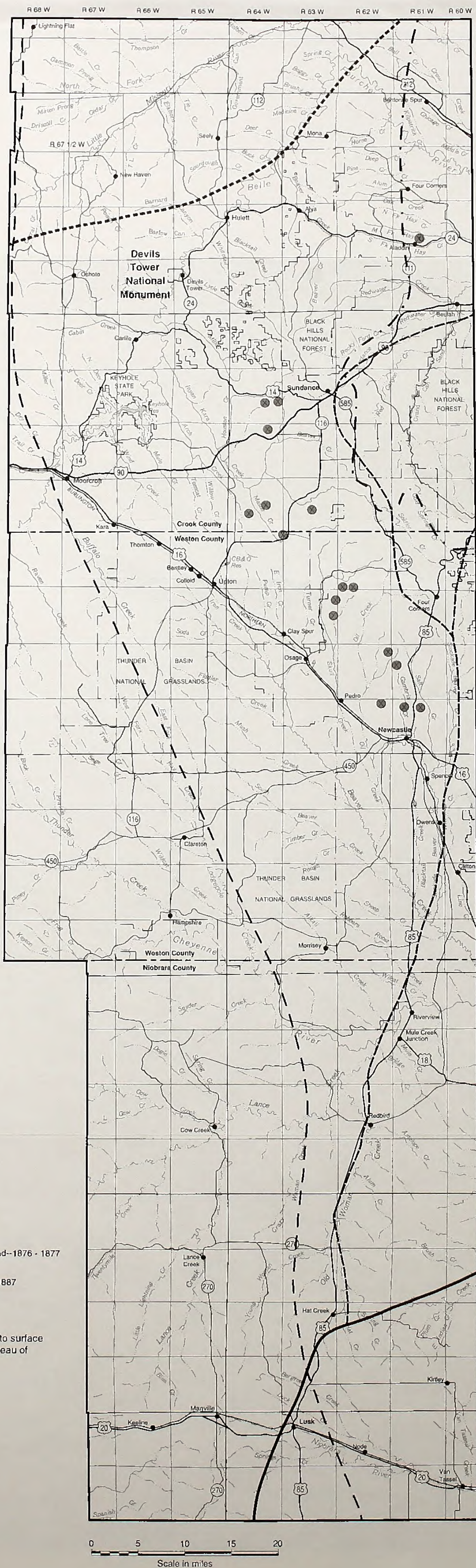
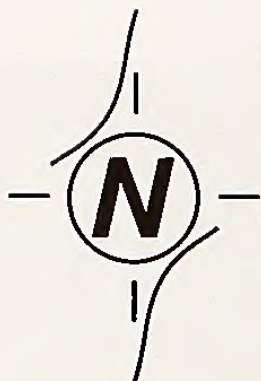
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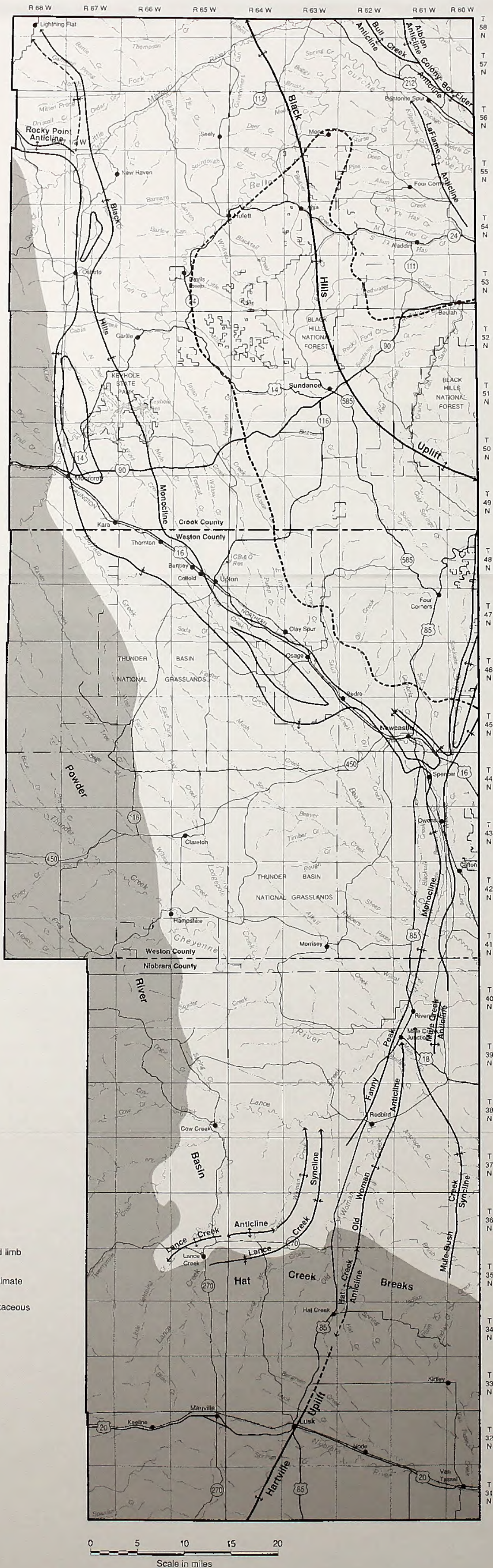
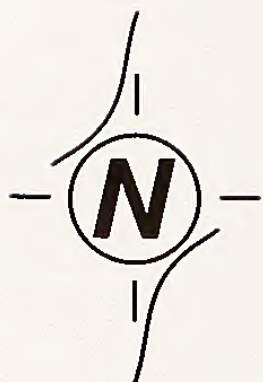
MAPS



- Hunt Trail--1811
- Texas Trail--1868 - 1897
- Custer Expedition Trail--1874
- Cheyenne - Black Hills Stage Road--1876 - 1877
- Black Hills Wagon Road--1877 - 1887
- Prospect Area

The above areas pertain only to surface acres administered by the Bureau of Land Management.

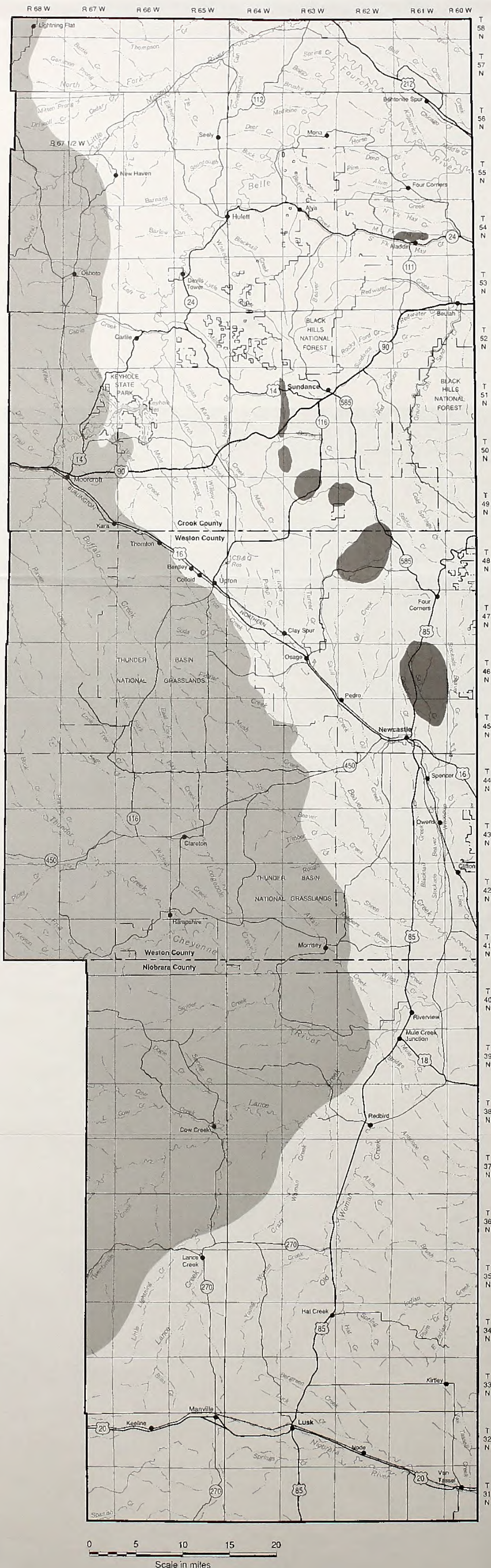
Map 3-1
Areas of Natural or
Historic Interest
Newcastle Resource Area



- Syncline
- Plunging Syncline
- Plunging Anticline
- Anticline, short arrows on inclined limb
- Monocline, dashed where approximate
- Structure contour on base of Cretaceous Fall River Formation
- Tertiary sedimentary deposits

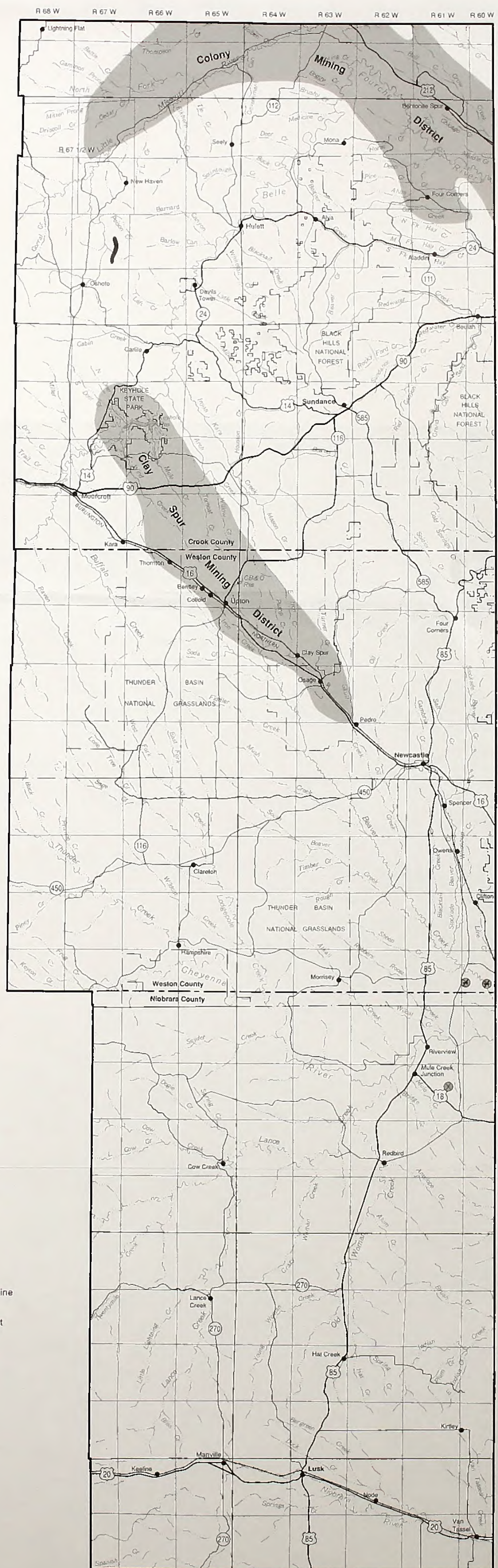
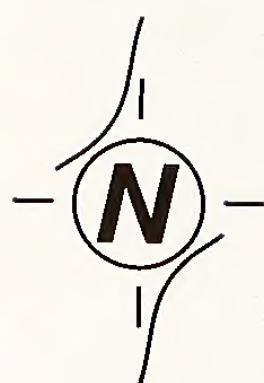
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Scale in miles

Map 3-2
Geology
Newcastle Resource Area

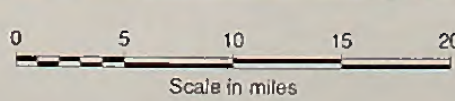


- Bituminous
- Subbituminous

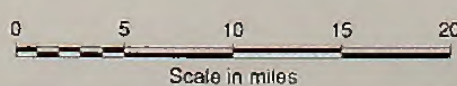
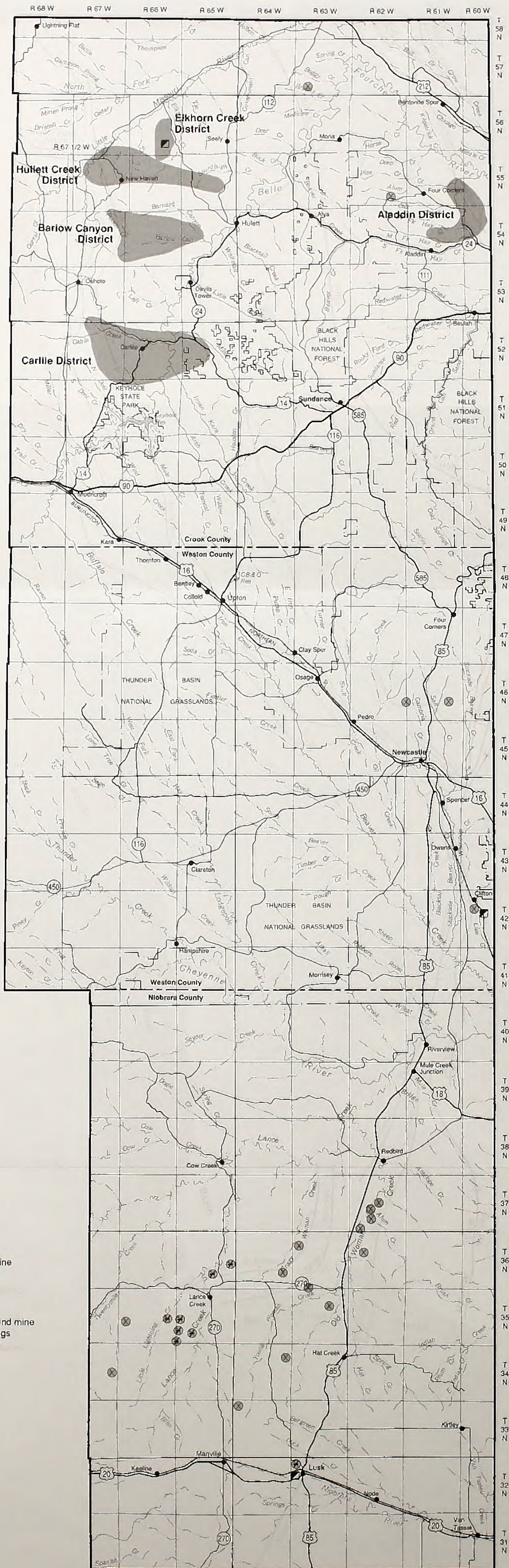
Map 3-3
Coal-bearing Areas
Newcastle Resource Area



-  Mining district
-  Mineralized area
-  Abandoned or inactive surface mine
-  Mineral occurrence or or prospect

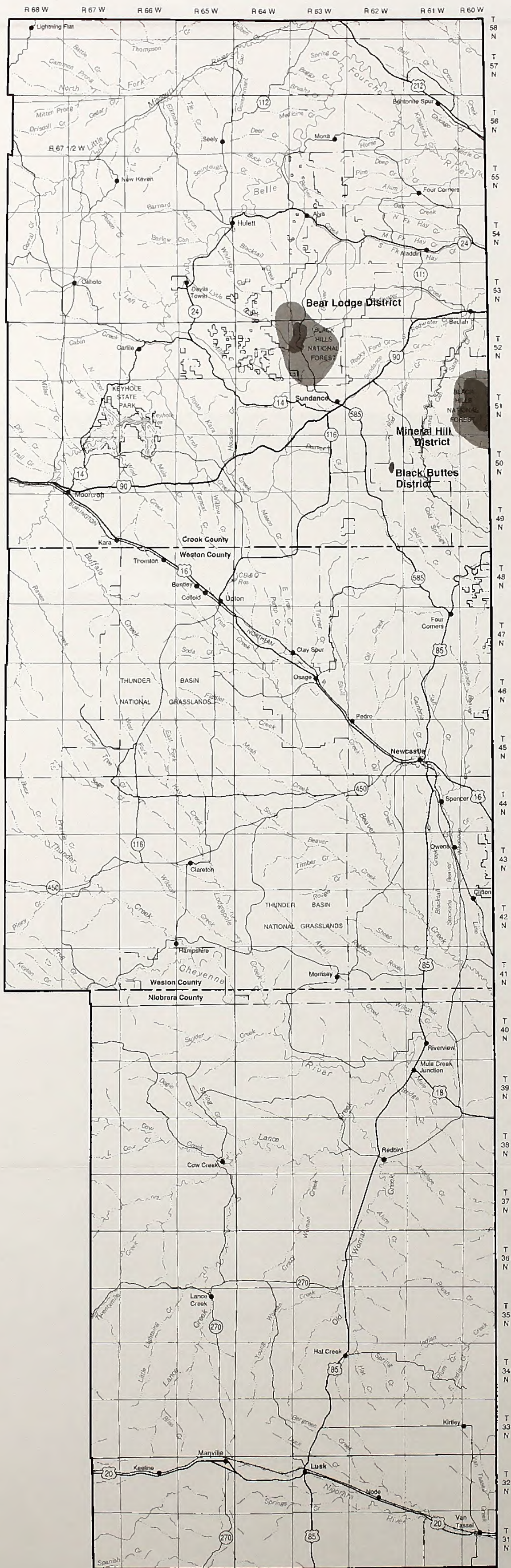
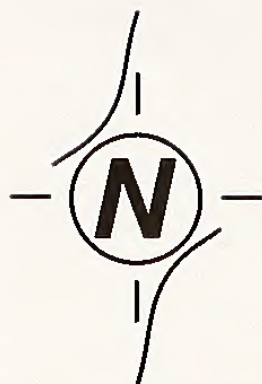


Map 3-4
Bentonite Mining Areas
Newcastle Resource Area

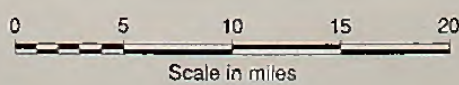


Map 3-5
Uranium Mining Districts
and Occurrences
Newcastle Resource Area

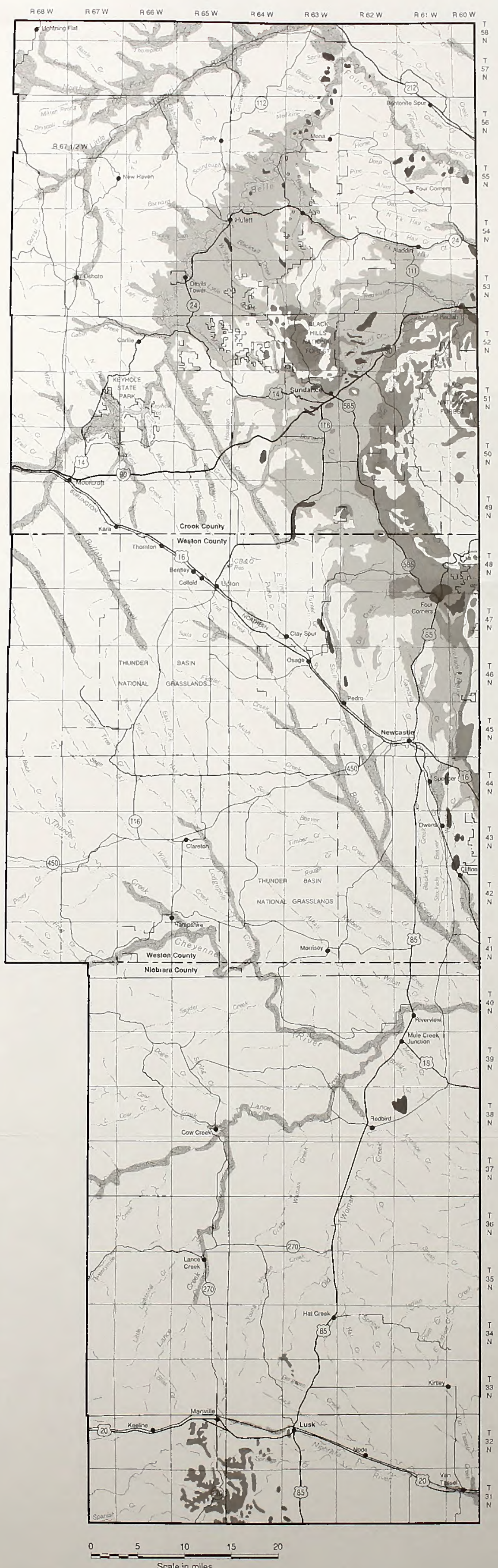
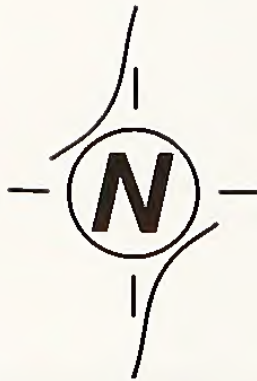
-  Mining district
-  Abandoned or inactive surface mine
-  Mineral occurrence or prospect
-  Abandoned or inactive underground mine with more than 200 feet of workings



-  Mining district
-  Mineralized area

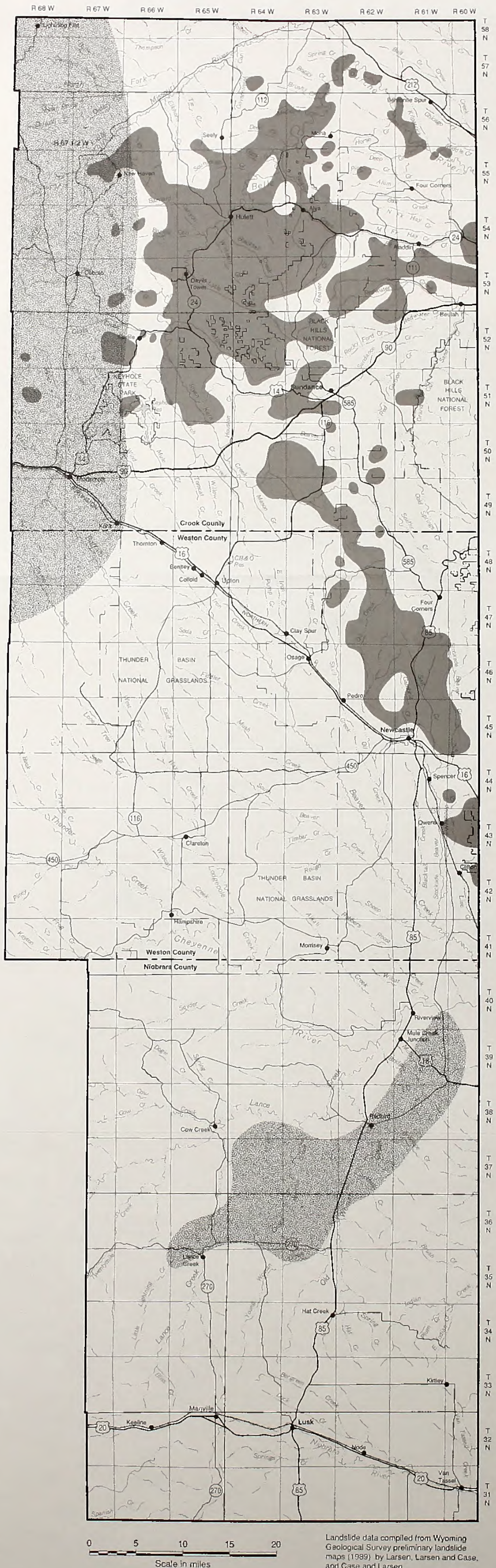
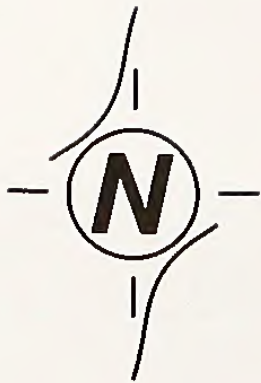


Map 3-6
Metallic Mineral Areas
Newcastle Resource Area



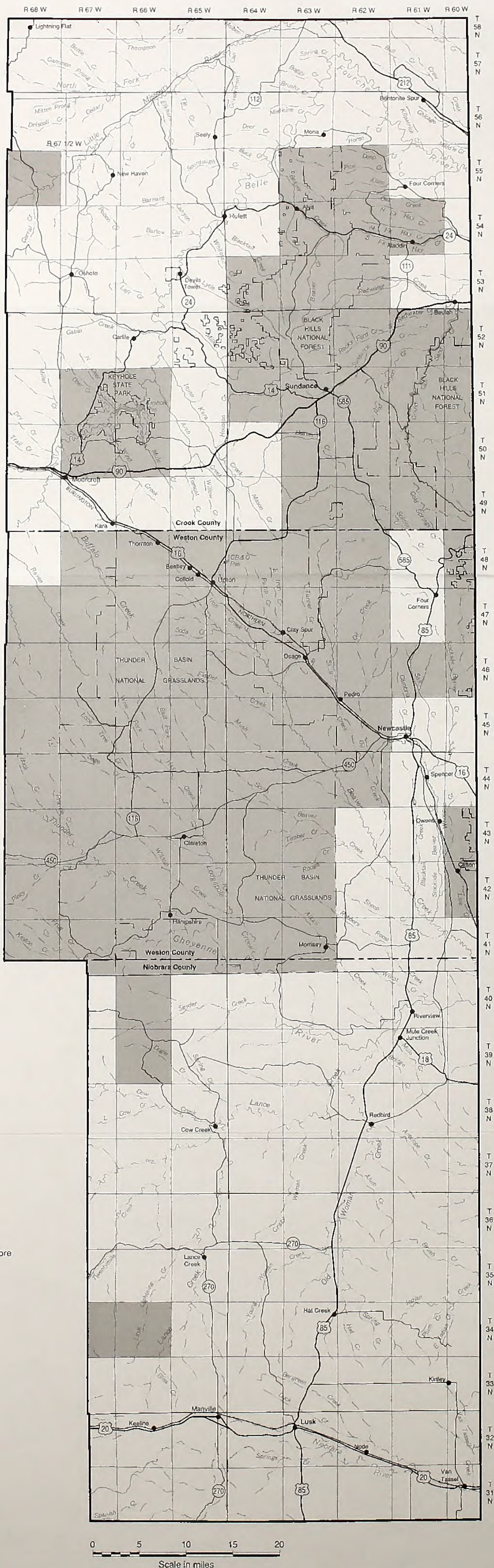
- Granite
- Limestone and dolomite
- Terrace sand and gravel
- Alluvial sand and gravel
- Gypsum - bearing formations

Map 3-7
Mineral Materials
Newcastle Resource Area

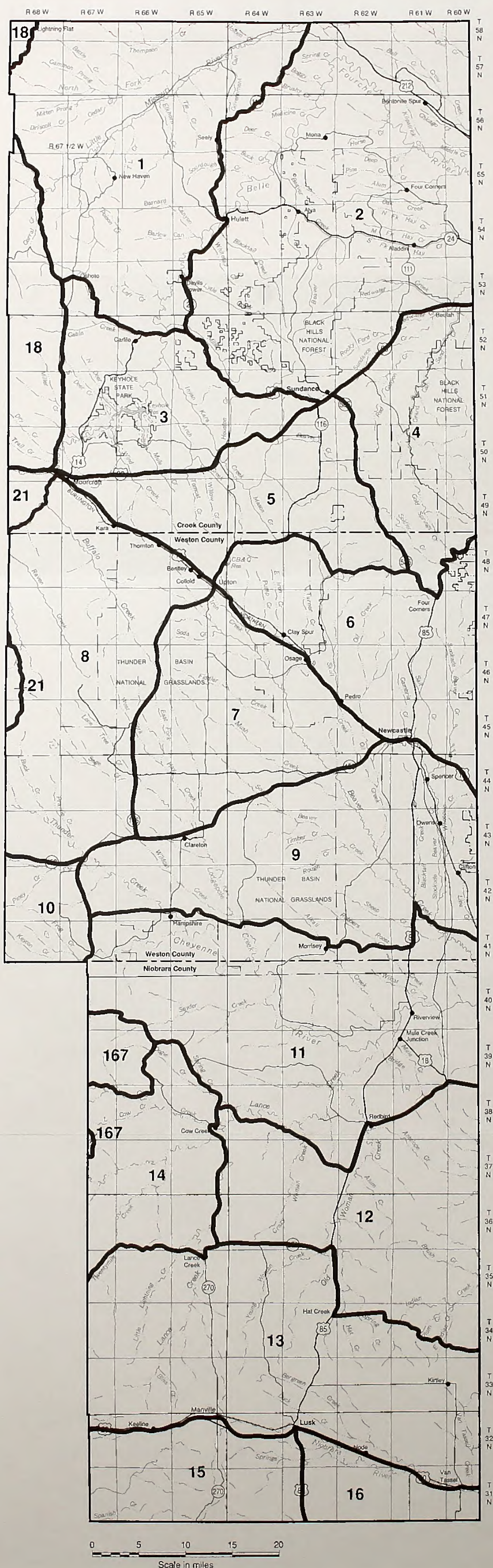


Landslide data compiled from Wyoming Geological Survey preliminary landslide maps (1989) by Larsen, Larsen and Case, and Case and Larsen.

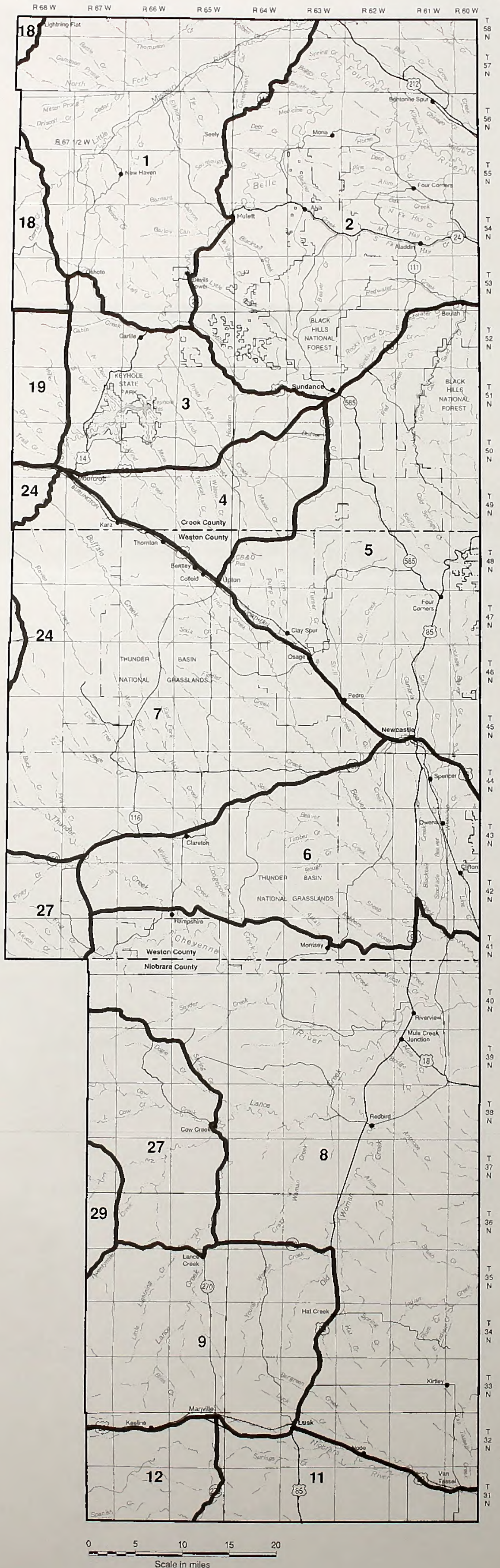
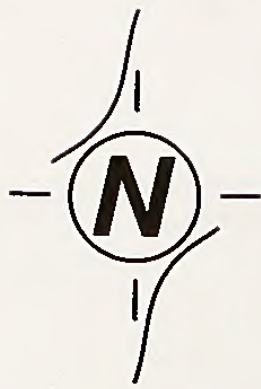
Map 3-8
Generalized Geologic Hazards
Newcastle Resource Area



Map 3-9
Existing Classifications
and Withdrawals
Newcastle Resource Area

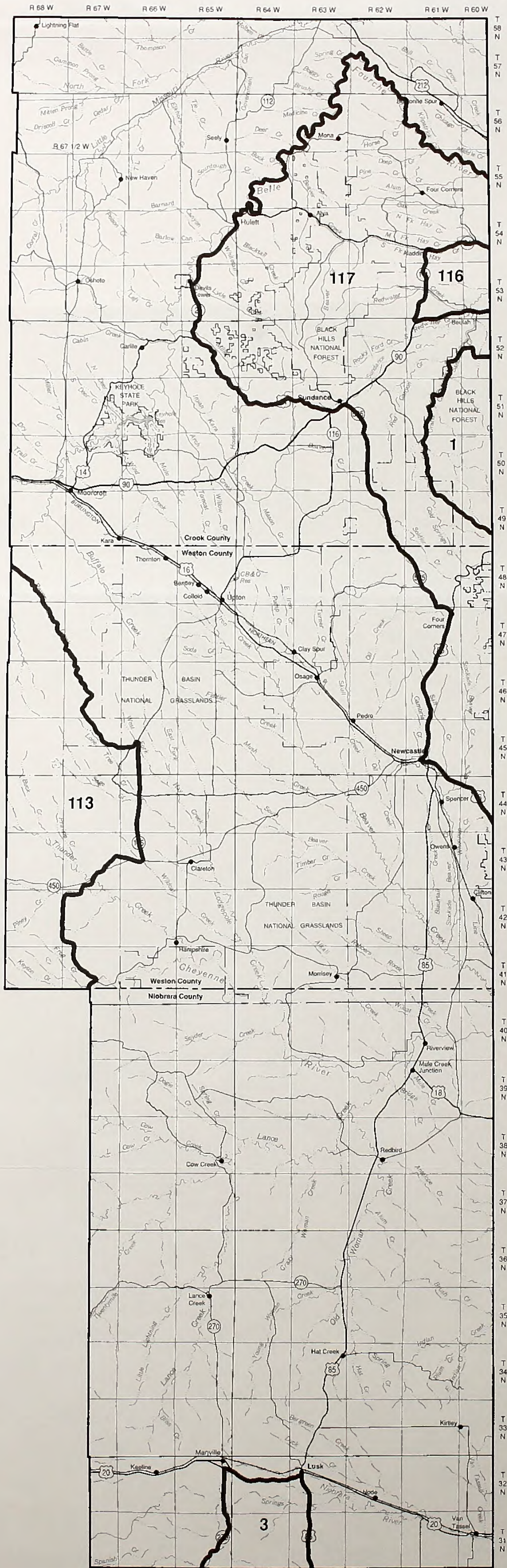
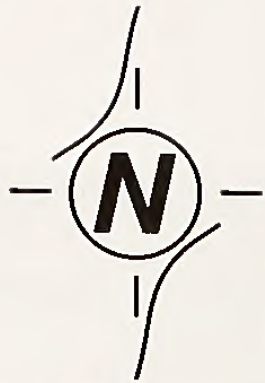


Map 3-10
Deer Hunt Areas
Newcastle Resource Area

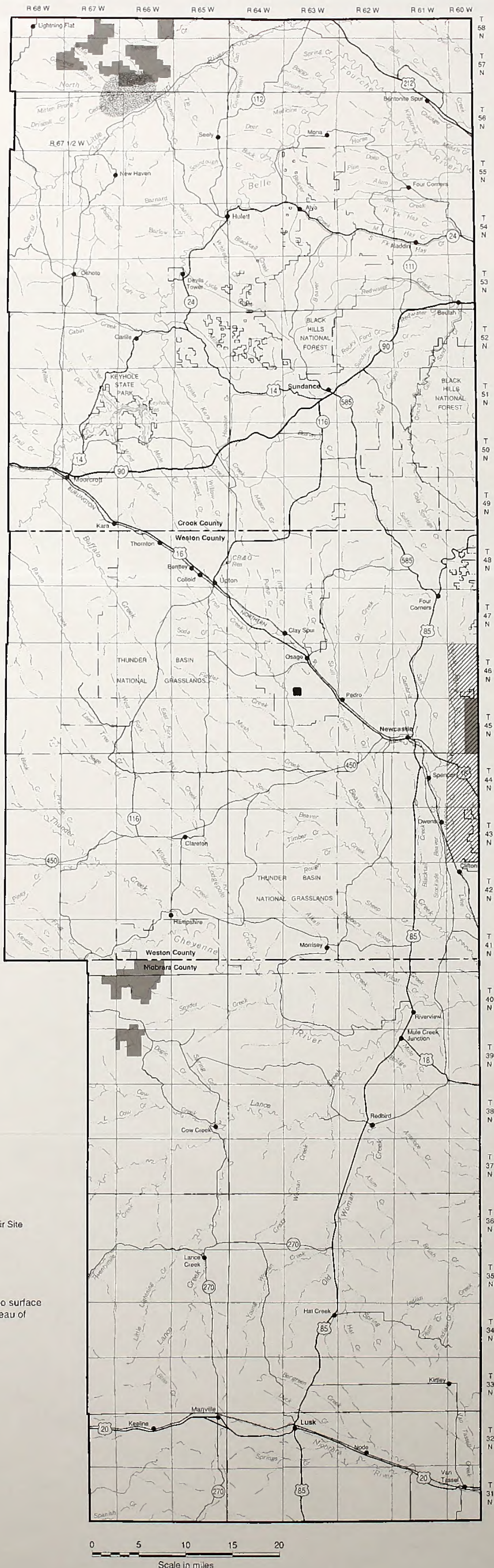
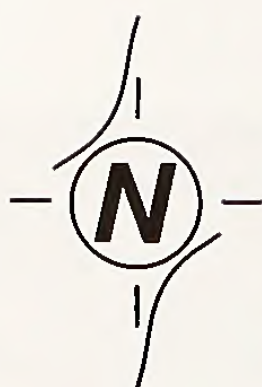


Antelope hunt area boundary

Map 3-11
Antelope Hunt Areas
Newcastle Resource Area

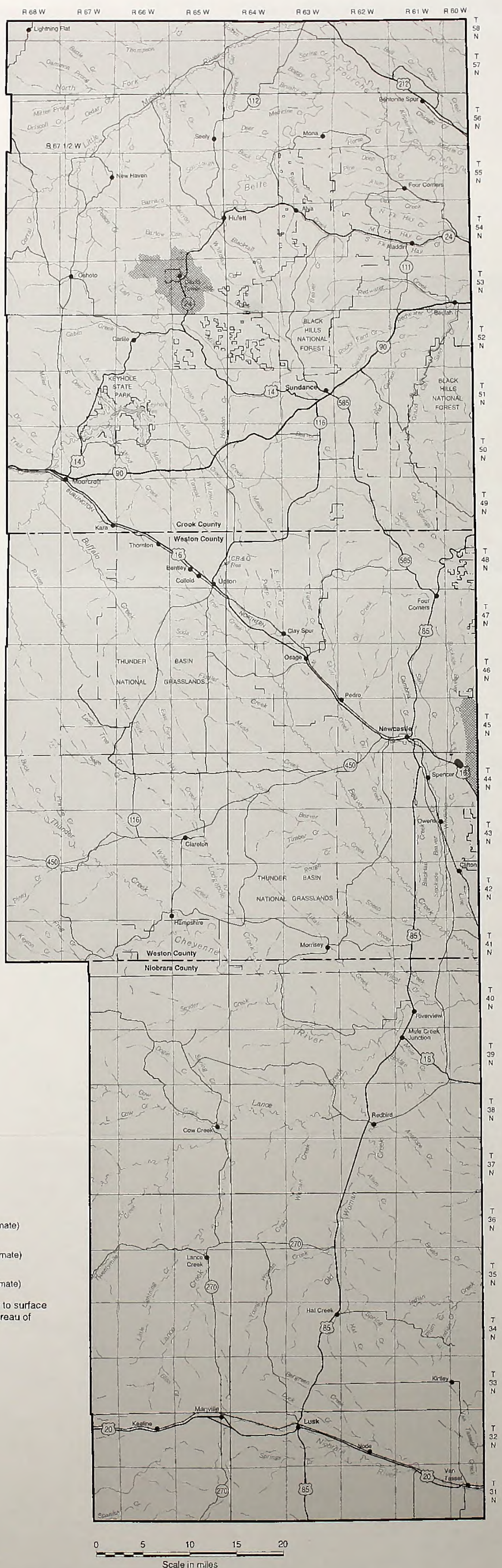


Map 3-12
Elk Hunt Areas
Newcastle Resource Area



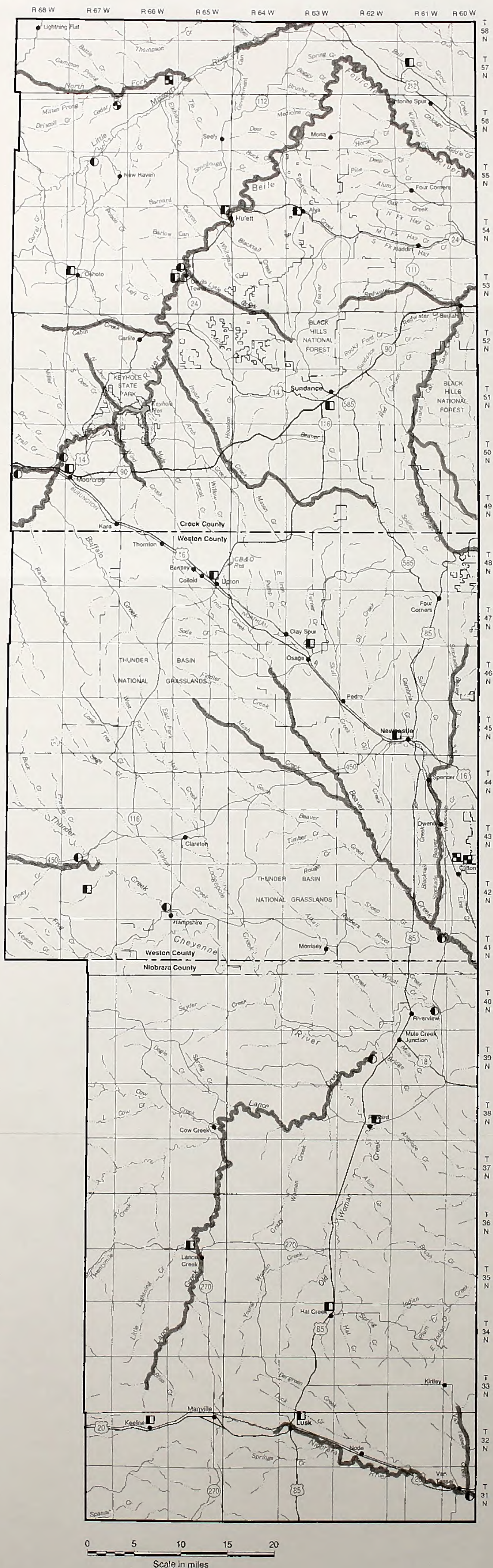
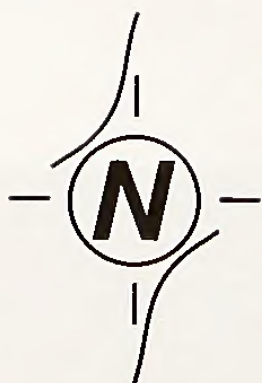
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Map 3-13
Recreation Development Areas
Newcastle Resource Area

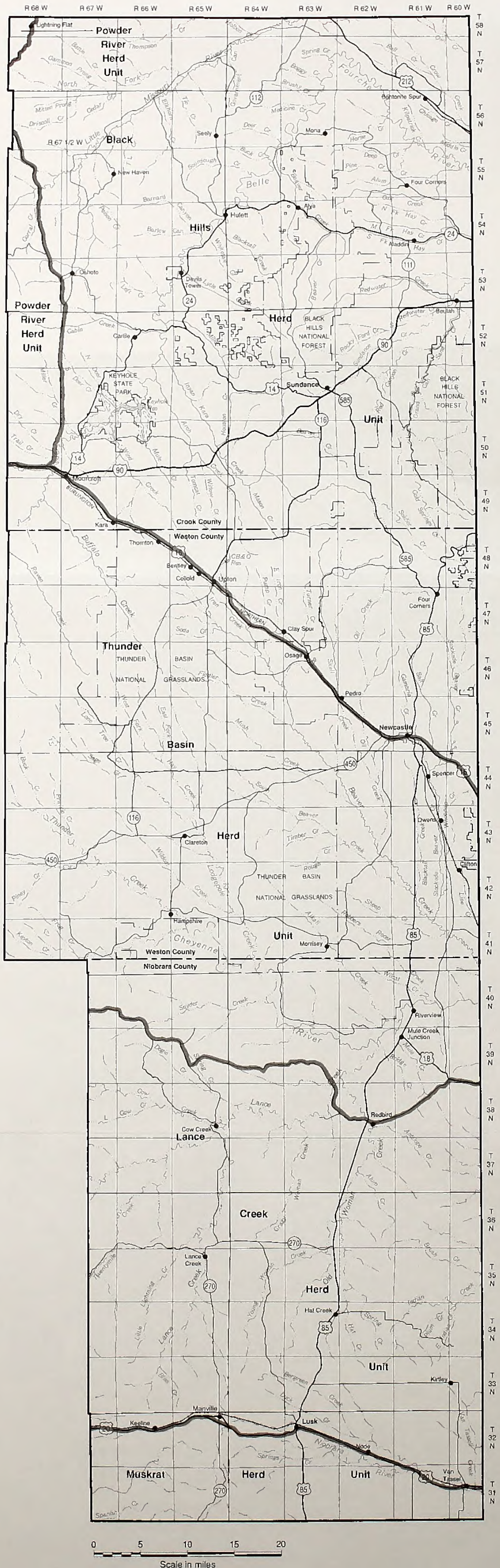


-  Proposed Class II Area (approximate)
 -  Proposed Class III Area (approximate)
 -  Proposed Class V Area (approximate)
- The above areas pertain only to surface acres administered by the Bureau of Land Management.

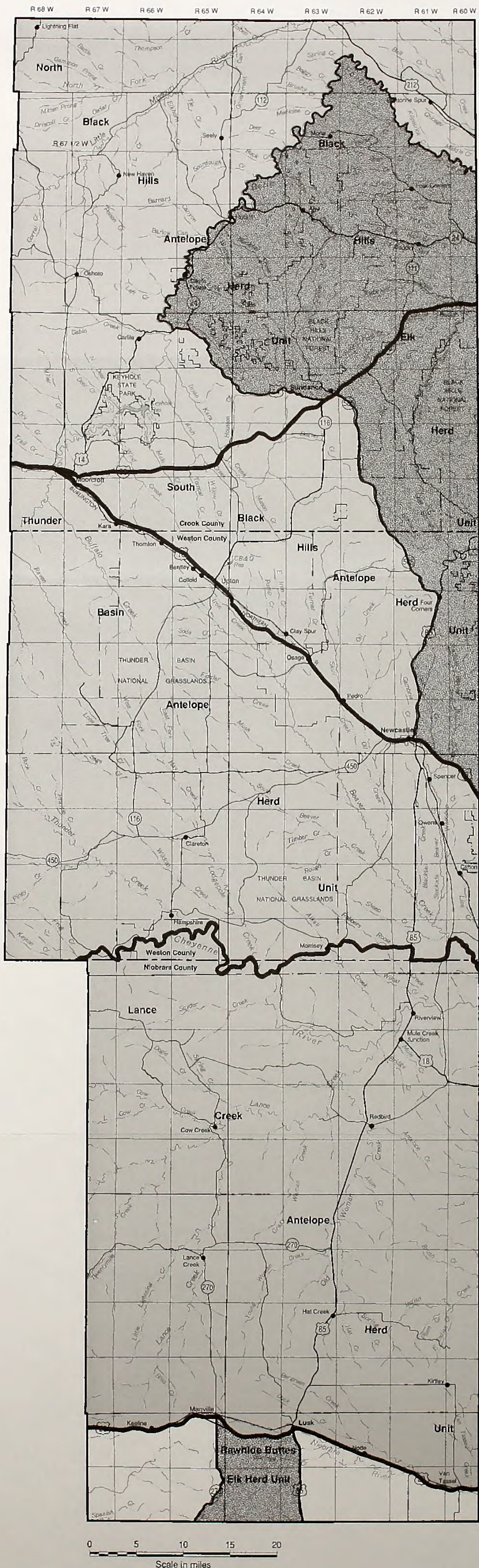
Map 3-14
Visual Resource Management
Newcastle Resource Area



Map 3-15
Surface Hydrology
Newcastle Resource Area

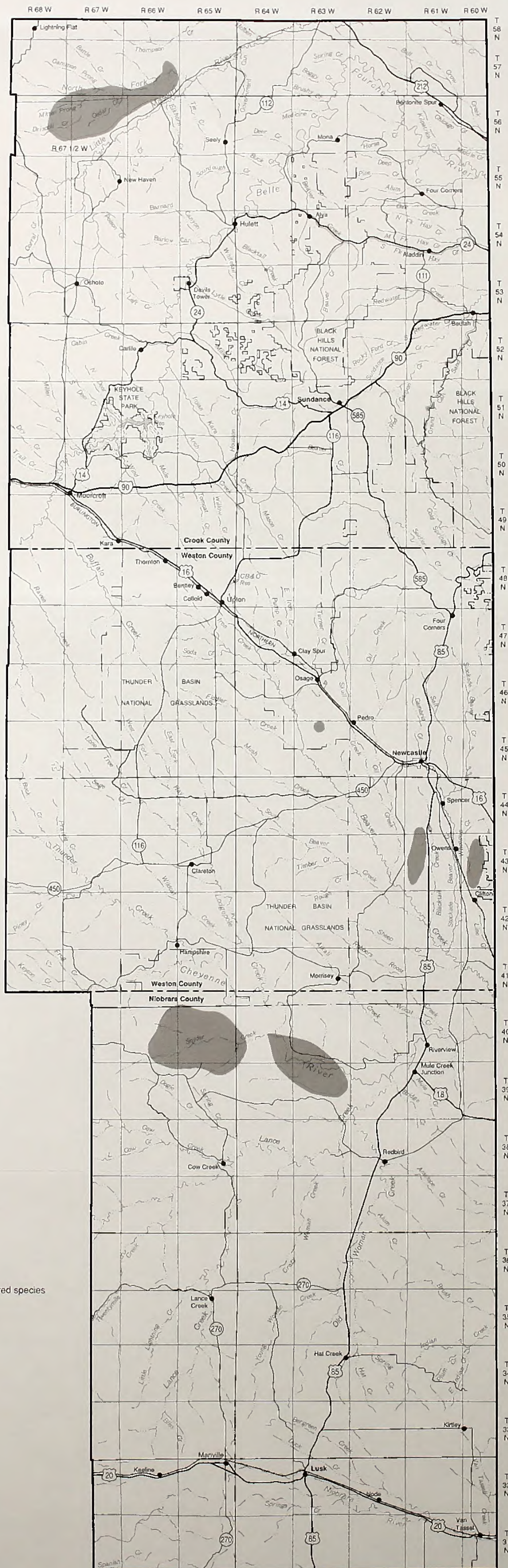
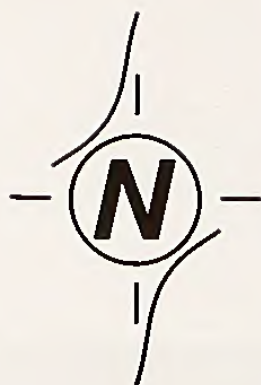


Map 3-17
Deer Herd Unit Area Boundaries
Newcastle Resource Area



-  Antelope herd unit boundary
-  Elk herd unit boundary

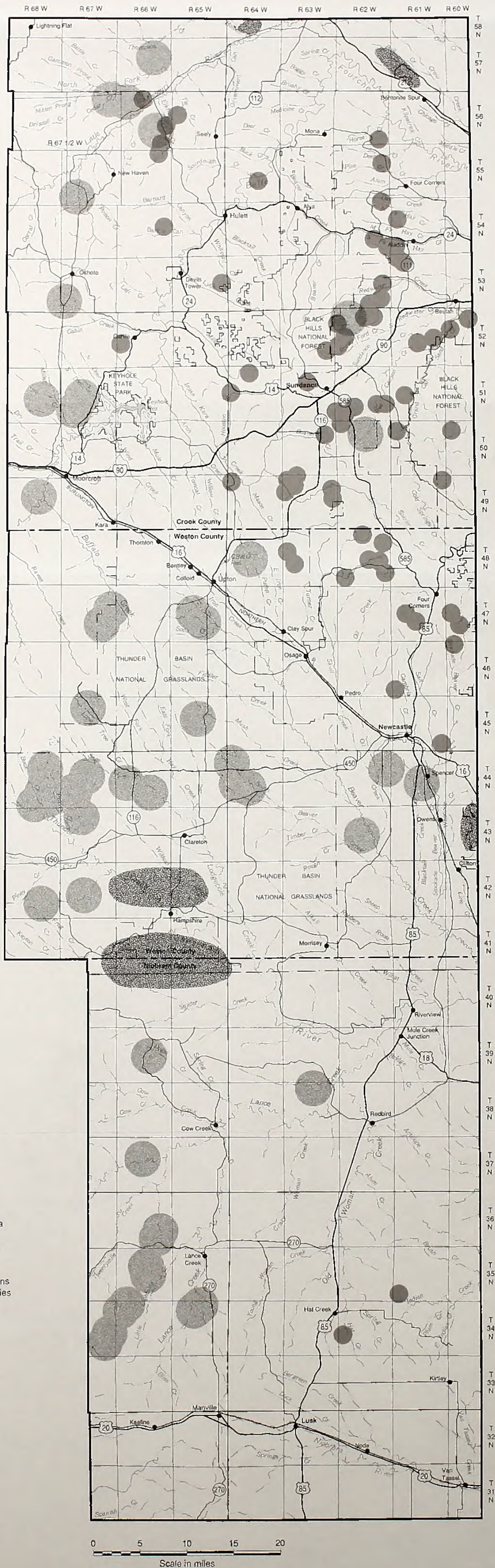
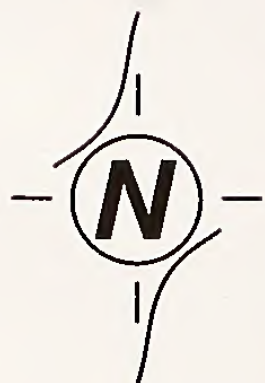
Map 3-18
Elk and Antelope Herd Unit
Area Boundaries
Newcastle Resource Area



 Potential threatened or endangered species habitat area

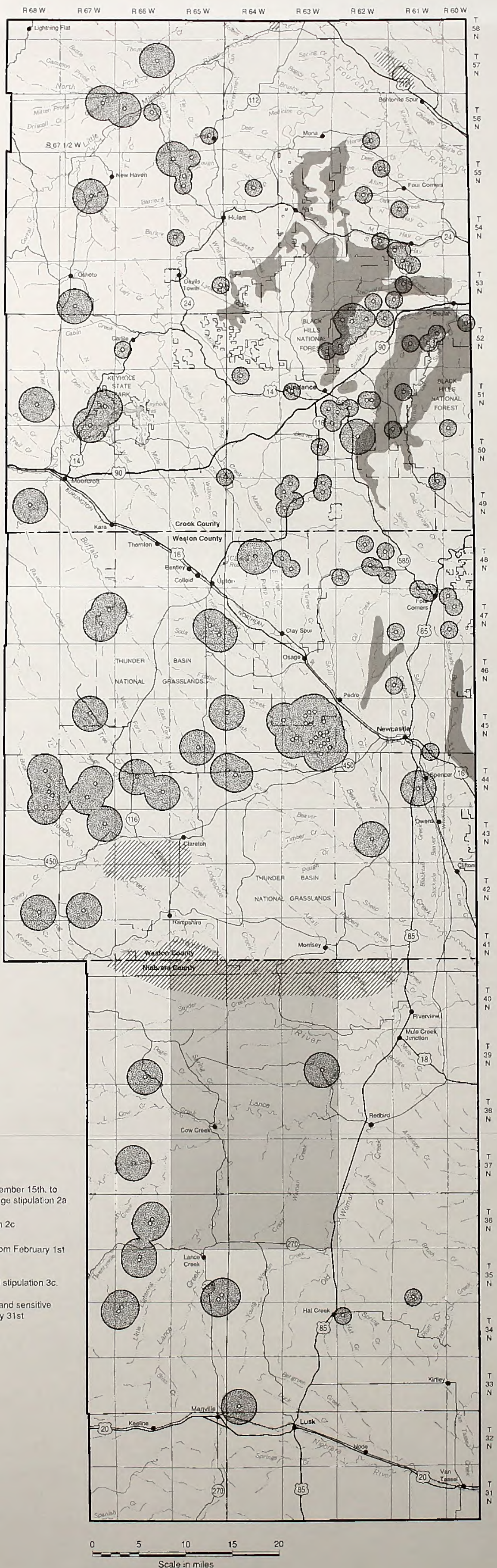
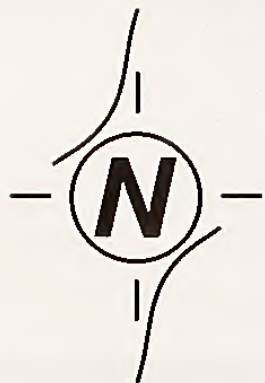
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Map 3-19
Threatened or Endangered
Species Habitat
Newcastle Resource Area

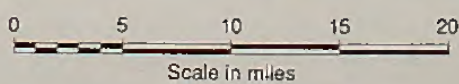
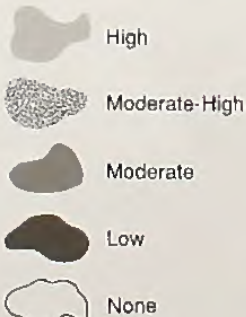
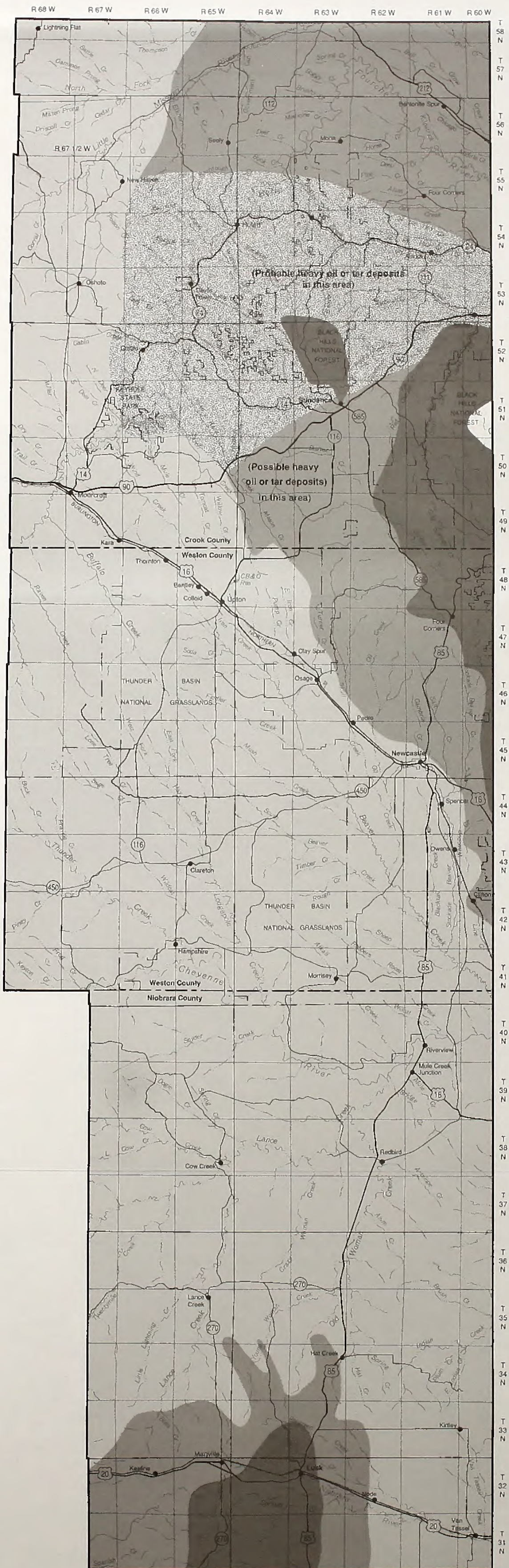
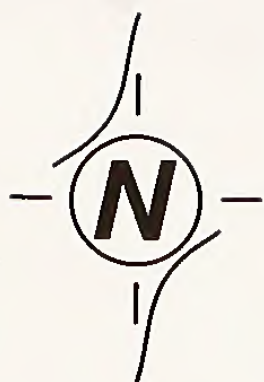


-  Sage grouse lek and nesting area
-  Sharp-tail grouse dancing ground and nesting area
-  Areas of raptor nest concentrations and/or state listed sensitive species

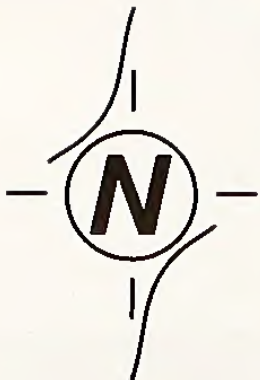
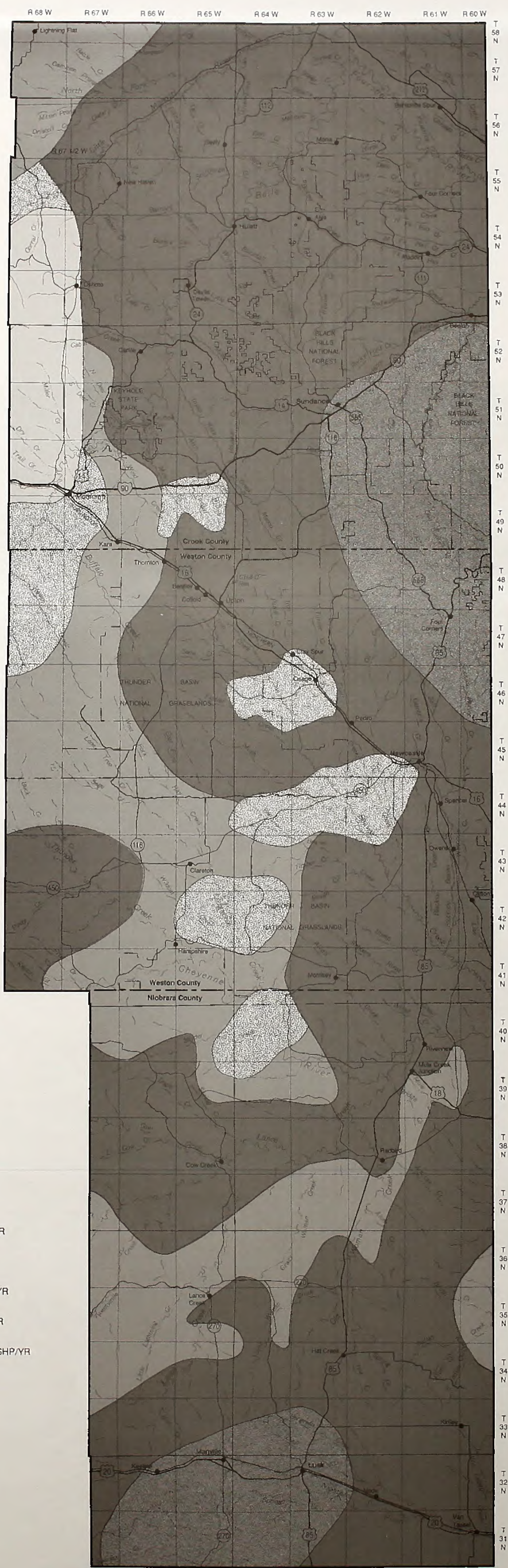
Map 3-20
Grouse Nesting and
Raptor Concentration Areas
Newcastle Resource Area



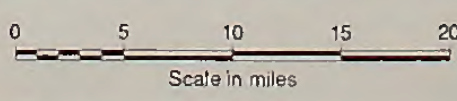
Map H-1
Leasing Decisions
Newcastle Resource Area



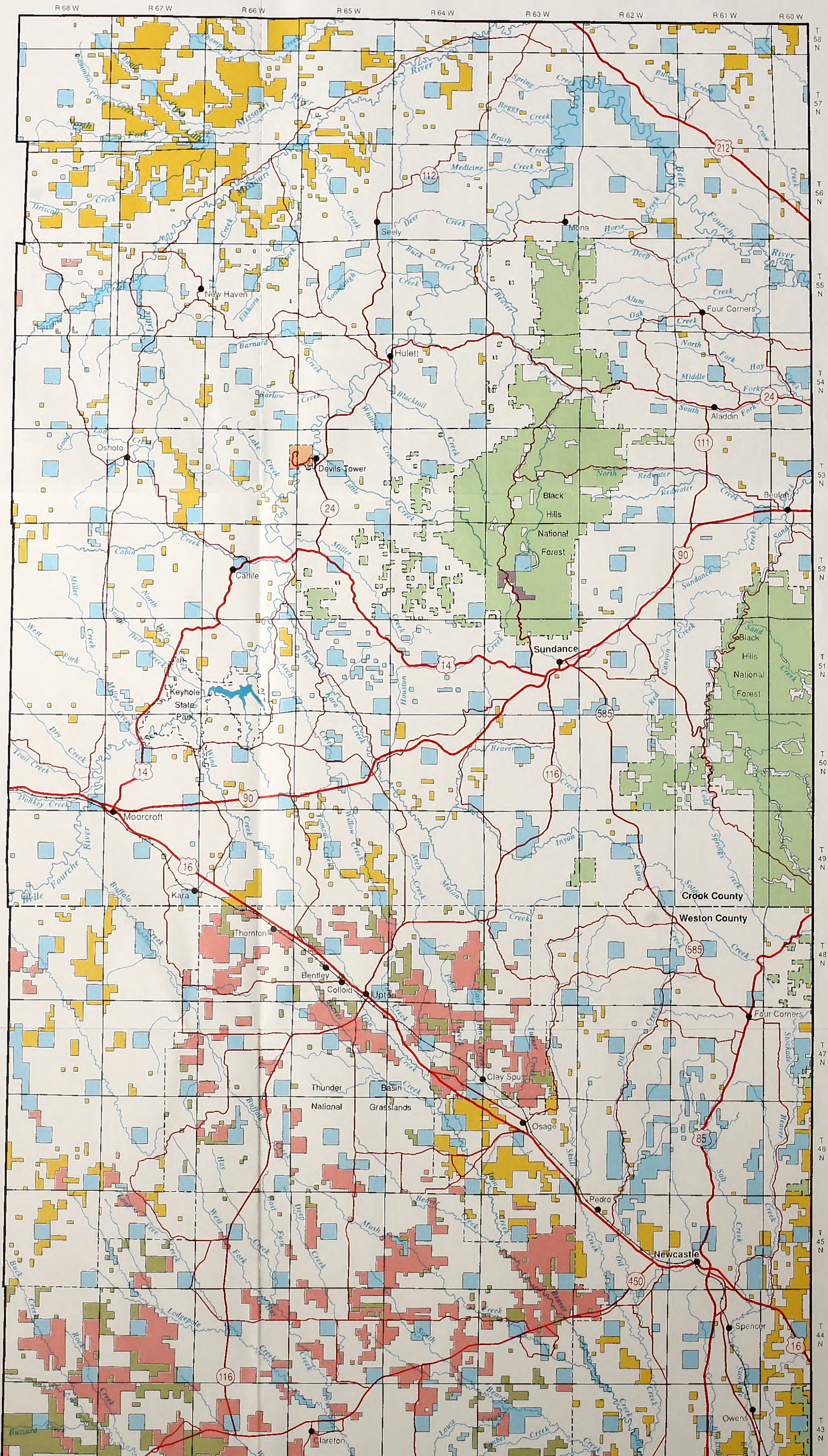
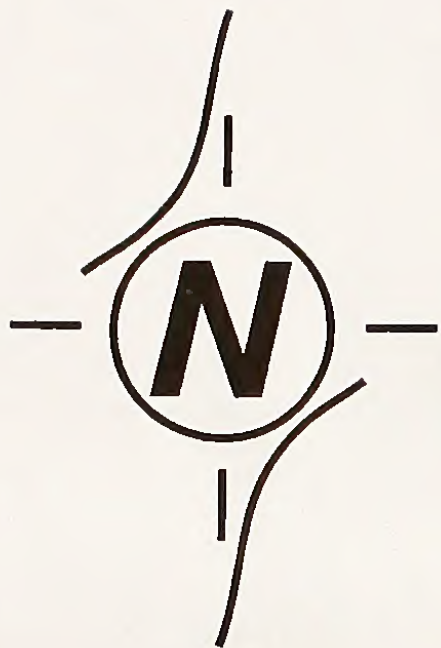
Map I-1
Oil and Gas
Occurrence Potential
Newcastle Resource Area

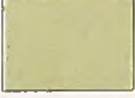


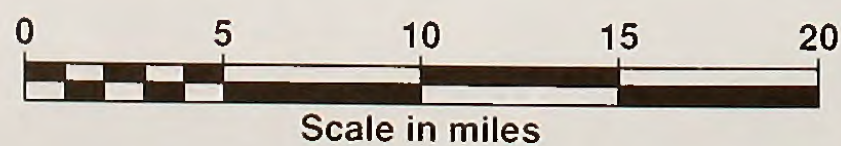
- Very High - over 5 wells/TSHP/YR
- High - 2 to 5 wells/TSHP/YR
- Moderate - 1/2 to 2 wells/TSHP/YR
- Low - less than 1/2 well/TSHP/YR
- Very Low - less than 1/10 well/TSHP/YR



Map I-2
Oil and Gas
Development Potential
Newcastle Resource Area

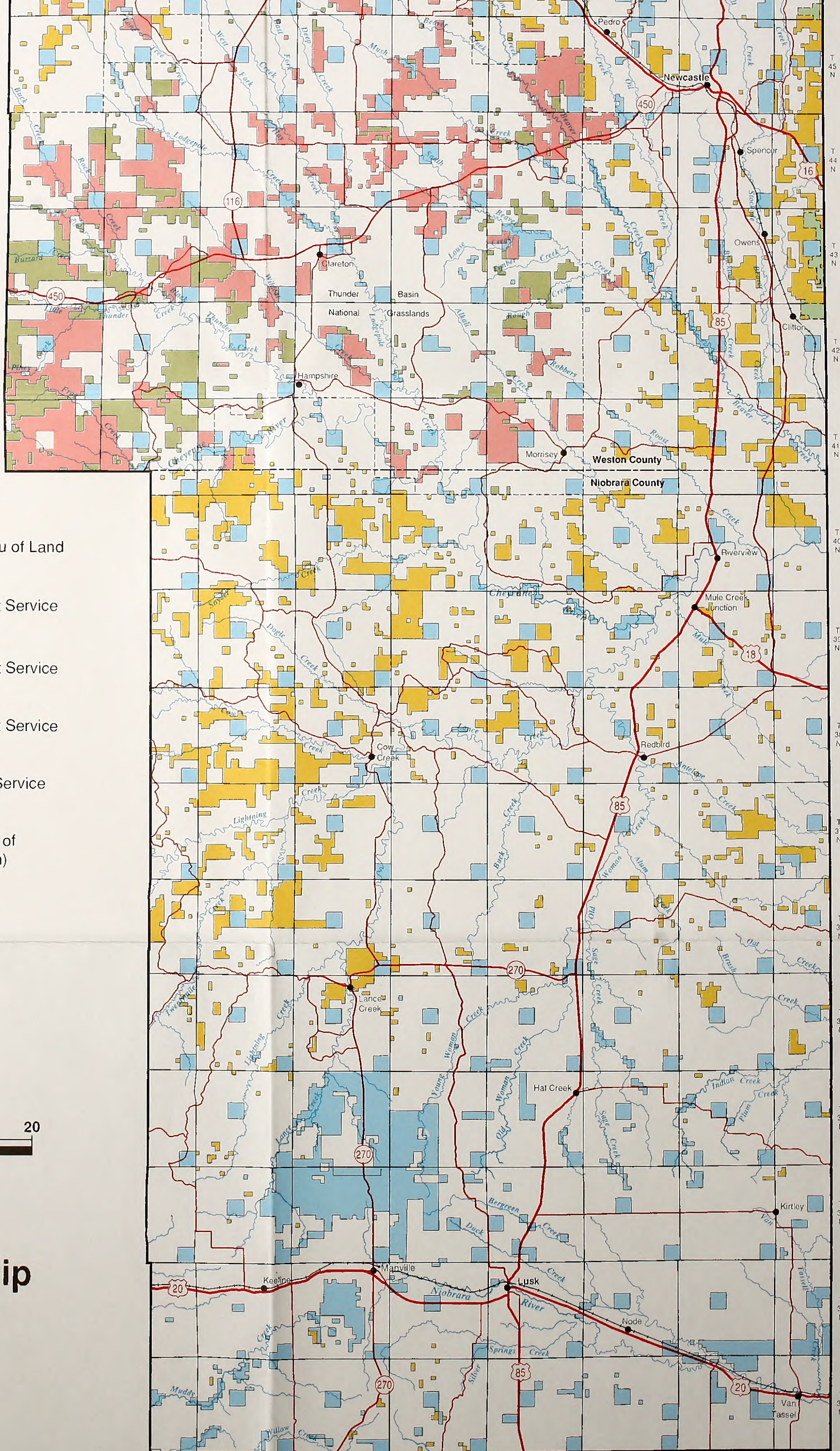


-  Land administered by the Bureau of Land Management
-  Land administered by the Forest Service (National Forest)
-  Land administered by the Forest Service (National Grasslands)
-  Land administered by the Forest Service (Land Use Lands)
-  Land administered by the Park Service (National Monument)
-  Land administered by the Corps of Engineers (Military Reservation)
-  State Land
-  Private Land



Surface Ownership

Newcastle Resource Area



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